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OF THE
MEDICAL SCIENCES.
JULY—DECEMBER
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THE
HALF-YEARLY ABSTRACT
OF THE
MEDICAL SCIENCES:

BEING
A PRACTICAL AND ANALYTICAL DIGEST OF THE CONTENTS OF THE PRINCIPAL
BRITISH AND CONTINENTAL MEDICAL WORKS PUBLISHED
IN THE PRECEDING SIX MONTHS.

TOGETHER WITH
A SERIES OF CRITICAL REPORTS ON THE PROGRESS OF MEDICINE AND
THE COLLATERAL SCIENCES DURING THE SAME PERIOD.

EDITED BY
W. H. RANKING, M.D. CANTAB.
PHYSICIAN TO THE NORFOLK AND NORWICH HOSPITAL.

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CICERO.

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The attention of our Publisher has been called to the want of punctuality in our exchanges with the New York Journal of Medicine.

The suggestions of M. D. have been attended to, as far as practicable.

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HALF-YEARLY ABSTRACT

OF

THE MEDICAL SCIENCES,

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PART I.

PRACTICAL MEDICINE, PATHOLOGY, & THERAPEUTICS.

SECT. I.—DISEASES OF THE NERVOUS SYSTEM.

ART. 1.—*On the Pathology of some Affections of the Ear, which induce Cerebral Disease.* By JOSEPH TOYNBEE, ESQ., F.R.S.

(Reported in the *Medical Times*, &c. &c.)

Mr. TOYNBEE has presented a memoir to the Royal Medical and Chirurgical Society, in which he has endeavoured to specify the diseases of the ear which are liable to extend to the brain, as well as to show that each division of the internal aural apparatus has its particular division of the encephalon to which it communicates disease. He states, for instance, that—1. Affections of the external meatus and mastoid cells produce disease in the lateral sinus and cerebellum. 2. Affections of the tympanic cavity produce disease in the cerebrum. 3. Affections of the vestibule and cochlea produce disease in the medulla oblongata. In speaking of the external meatus, its intimate relations with the lateral sinus and cerebellum are pointed out; the affection most frequently producing disease in these parts is shown to be catarrhal inflammation of its dermoid layer, one of the numerous diseases which have hitherto been classed together under the term otorrhœa. This affection of the external meatus is fully described; and it is shown that it is found to endure during many years, without the presence of pain, or any other symptom calculated to apprise the surgeon of the presence of a formidable disease, while the bone may be becoming slowly carious, and portions of the dura mater and cerebellum disorganised. In the second division of the paper, the tympanic cavity is described to be the part of the ear from which disease is most frequently propagated to the brain. This circumstance is accounted

companion should walk about until the end of the performances, and then rejoin the other four. After perambulating the streets for two or three hours, they went to the public-house in Bow Street, had one glass of brandy-and-water, and went to bed, the landlord imagining them to be man and wife; it happened, however, that the only unoccupied room had two beds in it. The young man states that he slept in one bed and the girl in the other, and repudiated with horror the suggestion that they slept together, or that any intercourse took place between them. In the morning, on rising, he spoke to his companion, who complained of being sleepy, and expressed a wish to remain longer in bed; he therefore left her, went out for a walk, and on his return found her still in bed, and unable to be roused. The landlady was called to her, who, becoming alarmed, sent for Mr. Edwardes.

8 o'clock, p.m.—A great alteration has taken place in the condition of this young woman since leaving her in the afternoon. She remains perfectly insensible; respiration more difficult, and almost stertorous; countenance of a cadaverous paleness, and the features constantly affected with convulsive movements. Pulse quick and feeble. Heart acting with the same degree of violence as before. About a pint of pale urine was withdrawn by the catheter; and as the bowels were unrelieved, and the previous injection retained, another enema of soap and water was administered. A large mustard poultice was also applied over the chest, &c.

The urine withdrawn on the first visit was found on examination to be pale, limpid, very acid, and having a sp. grav. of 1008; no deposit was produced by heat, nor on the addition of nitric acid, liquor potassæ, or liq. ammoniæ. By the microscope (420 diameters) nothing could be seen but a few free oil globules—of course derived from the grease of the catheter.

At half-past ten o'clock, p.m., this young woman died.

18th September.— *Sectio cadaveris post-mortem horis xvi.*—External appearance of the body natural, well-formed, and rather plump; no discolorations or marks of violence anywhere visible. No rigor mortis. On removing the calvarium, to which the dura mater adhered with much firmness, the sinuses of the brain appeared enlarged and somewhat congested, as did the large veins of the hemispheres on slitting up the membranes. On slicing off the hemispheres of the cerebrum, the puncta vasculosa did not appear more numerous than usual; the lateral ventricles were healthy, containing no serum; and, to be brief, every part of the cerebrum, cerebellum, and medulla oblongata, were carefully examined, and found firm and perfectly healthy. The upper half of the spinal cord was also found quite natural. The cavity of the mouth, the pharynx, larynx, &c., were healthy. In the thorax the posterior parts of the lungs were found congested, but not more so than was to be expected from the gravitation of the blood. The heart was natural in size; the cavities were healthy, as were their walls, excepting those of the left ventricle, which were hypertrophied, being about an inch thick. Nothing could be found to account for this condition, there being no visible impediment to the free play of the heart, nor any physical obstruction to the flow of blood through it.

In the abdomen all the organs appeared perfectly healthy, but pale. The stomach and intestinal canal were natural; in the former was a little grumous fluid, which was removed for analysis. The body of the uterus was slightly enlarged, as was also its cavity, which was lined by a soft humid paste-like secretion, analogous to the membrana decidua. The ovaries were pale, and in the left were two or three large cysts; there was no appearance, however, of a corpus luteum. In removing the vagina in order to examine microscopically the mucus from its walls, the rectum was wounded, so that the object was defeated.

On a subsequent examination of some of the tissues, &c., microscopically, nothing abnormal could be discovered. The structure of the kidneys was natural. The muscular fibres of the heart were particularly examined, but with the same result; there was no fatty degeneration. The watery part of the blood appeared to be in excess, with a deficiency of red globules.

An inquest having been ordered, it became necessary to ascertain with certainty the absence of any poisonous agent, although there was no reason to suspect the presence of such. The author therefore first applied the tests for morphia and meconic acid to the contents of the stomach, but failed in obtaining any evidence which would lead to the supposition that opium had been administered. The blood was then examined for the purpose of detecting chloroform on the plan advocated by M. Rogsky, founded on the principle that when this agent is exposed to a red heat, it is decomposed into chlorine and hydrochloric acid. For this purpose a small bottle was half filled with blood, and stopped with a cork holding a curved tube, into which a piece of paper covered with paste and supporting some iodide of potassium, was introduced. A portion of the tube between the paper and the bottle was then heated by the spirit lamp, and the bottle placed in boiling water, but no appearances indicative of the presence of chloroform could be obtained. Had any been present, it would have become volatilised, and decomposed while traversing the heated part of the tube, when its chlorine, set free, would have decomposed the iodide of potassium; the iodine in its turn being set free, and acting upon the starch of the paste, producing the characteristic blue colour.

Remarks.—Dr. Tanner has thought this case worthy of record, not only on account of its presenting some interesting features in a medical point of view, but also because it may prove a not unimportant contribution to forensic medicine.

Looking at it in its relations to practical medicine, the author notices that several similar cases have been recorded by Dr. Abercrombie under the name of congestive or simple apoplexy, though, as shown by Dr. Todd in his admirable Lumleian Lectures for 1850, they might with much more propriety be referred to a state of epileptic coma. This opinion is not invalidated by the fact that this girl had never previously had a fit of epilepsy, as Dr. Tanner imagines that the strong excitement under which she may so reasonably be supposed to have suffered, together with her weakened condition, were quite sufficient to develop such an attack. She was naturally of a weak constitution,

and of a very excitable temperament; and it was for these reasons against the wish of her parents that she made the present excursion.

Dr. Tanner, however, mentions that it was not until the father came to London to attend the inquest, that it could be ascertained with any degree of certainty the previous state of this unfortunate girl's health; could he have done so, he would have blamed himself much more than he did for having practised venesection. He would particularly draw attention to the fact, that the loss of only nine or ten ounces of blood in this case did great harm, although he thinks and sincerely trusts that it did not materially influence, though it may have hastened, the result. He believes that, as regards the vast majority of cases of delirium and coma, the truth of Dr. Todd's assertion that they are non-inflammatory, is undeniable; and he thinks the present instance may be adduced as a proof of the justness of his observation, that "the employment of general or local bloodletting is a practice not to be justified by anything in the clinical history or the morbid anatomy of these affections, unless, perhaps, in the truly inflammatory forms, or where some inflammatory complication may exist." Dr. Todd also remarks, "that bleeding tends to the production of that state of blood which is favorable to the development of the comatose or delirious states."

Of the great value of these statements Dr. Tanner has been long convinced, having seen many of the patients under Dr. Todd's care, the consideration of which has led him to these conclusions. The subject of this paper, therefore, would not have been bled, had he not have been misled by the forcible action of the heart, and the distension of the jugular veins. Looking at the girl's age, the absence of any morbid sound on auscultation, and the want of a decided contradiction of the heart by the pulse, it was thought that the steady uncontrollable impulse depended upon an excess of blood having to be urged onwards; the possibility of the existence of simple hypertrophy was never thought of.

ART. 3.—*Epilepsy—Treatment by Tracheotomy.* By MR. CANE.

(*Lancet*, July 12, 1851.)

In his various lectures and other communications on spasmodic diseases, Dr. Marshall Hall has repeatedly expressed his opinion that closure of the glottis is a necessary element in the act of convulsion, and has suggested that if an opening were made in the trachea, the convulsion would cease. The justice of the surmise is admirably shown in the following case:—

Mr. Cane was summoned on February 1st, 1851, to the case of a boatman, aged 24, who had become subject to violent fits of epilepsy, one of which had just occurred in so extreme a form as to leave him in a state of deep apoplectic coma and asphyxia, inspiration being performed only "by seldom and short catches, whilst the veins of the head and neck were everywhere visible, and greatly distended." This state had continued nineteen hours. "Feeling convinced," Mr. Cane

observes, "that the patient must shortly expire, and that the root of the evil was in the closure of the larynx, I at once proceeded to open the trachea, a matter of no small difficulty, on account of the twisted state of the neck, the engorged state of the vessels, and the constant action of the muscles. The operation of tracheotomy was performed, and the tracheal tube is kept in the trachea to the present time. The relief to the patient was immediate; the air passed into the lungs, the state of spasm subsided, with a turgid condition of the head and neck, and the patient soon recovered his sensibility. This was not the only gratifying result; although the poor man had experienced his epileptic seizures in increasing violence during seven or eight years, and recently thrice a week, he had, on April 1st, during two months, had no return of them. More recent accounts of the patient, who is now in Staffordshire, confirm the former report; the tube is still kept in the trachea, and the epileptic seizures have not recurred.

ART. 4.—*Differential Diagnosis of the different kinds of general Paralysis, by the aid of Galvanism locally applied.* By M. BRIERRE DE BOISMONT.

(*Annales Médico-Psychologiques*, and *London Journal of Medicine*, June 1851.)

The author thinks that there exist two species of general paralysis, which differ completely in their nature and their seat. The first species of these progressive paralytic cases, without alienation of mind, exhibits, as its essential character, a weakening, a diminution, and an abolition of irritability, more marked in proportion to the greater duration of the disease. This alteration may begin in a muscle, or in a limb, generally in the inferior extremities; then it attacks, successively, all parts, and reaches the tongue. In many cases, the autopsy, made with the greatest care, has revealed no lesion in the brain or the spinal cord, in spite of the long duration of the disease. M. de Boismont cites the case of a lady in whom first the left upper extremity, then the lower, and, successively, those of the other side, lost their power. The fingers were contracted, and it became difficult for her to hold objects; walking was effected only incompletely. The paralysis reached the tongue, and the patient pronounced, with slowness and hesitation, the words suggested by her mind. Sensibility was preserved, the intelligence was unimpaired; the disease lasted more than a year. The digestive functions were well performed; the urine and the fæces were under the patient's control. The electrical apparatus produced no contraction in the lower limbs. The tibialis anticus, the peronæi and the flexors, remained immovable under the influence of the current. This phenomenon was remarked in a less marked degree in the muscles of the superior limbs; the muscles of the trunk were feebly contracted. To this case another is added, of a patient who died under the care of M. Andral, with all the symptoms of general paralysis, without mental aberration, which had lasted for more than a year. In this case, irritability was completely annihilated, although he could still execute some movements. Consciousness remained unimpaired to the end. The autopsy, made with care under

the superintendence of M. Andral, revealed no alteration; and a microscopical examination, made by M. Lebert, exhibited only a fatty deposition in some of the muscles of the thigh. The muscular fibre of the muscles of the leg, in which irritability was extinguished, showed no alteration. It was interesting to contrast these results with those furnished by the examination of the general progressive paralysis of the insane. M. Boismont and M. Duchenne accordingly instituted experiments upon three paralytic insane patients, who were paralytic in different degrees. The first had only an intermittent stammering; the second was at the second period, but considerably emaciated; the third, who had been paralytic for several years, stood with difficulty, and was no longer able to answer questions. In all three, irritability existed in a marked degree. These experiments were repeated at the Bicêtre, and the patients were selected indiscriminately, among the most advanced cases, the most aged, and those who had kept their beds for several months. Irritability was ascertained to exist in the six cases examined, two of whom had arrived at a great degree of emaciation, and even of atrophy, especially in the inferior extremities. Almost all these patients passed their fæces and urine under them. It may therefore be advanced, as a constant circumstance, that in cases of general paralysis with mental alienation, there is preservation of irritability. M. de Boismont remarks that, with regard to the seat of general paralysis, it is impossible to admit that it can always be localised in the nervous centres. There are cases of this disease which depend upon the spinal cord; others, upon the great sympathetic. There are some which are *perispherical*, and several which are not connected with any appreciable lesion of the nervous centres; and there are a certain number of cases which depend upon disease of the brain.

ART. 5.—*Colchicum in the Cerebral Complications of Scarlatina.*

Dr. HUGHES BENNETT mentions the case of a boy, æt. 14, the subject of scarlatina. He was delirious, and constantly rolled the head from side to side. He was conscious when spoken to; the tongue was protruded with difficulty, dry, red, and studded with fluid elevations; bowels open; pulse 130, weak; urine scanty, not acted upon by heat and acid; eruption full and bright. He was ordered diuretics and salines. He continued in the same state, with delirium and coma, till the sixth day. He was now ordered—

Vin. Colchici, ℥ss;
Sp. Æth. Nitrici, ʒiij;
Potass. Acet., ʒij;
Aquaë, ʒiij.

Dose.—A teaspoonful every four hours.

On the following day all coma and delirium had disappeared. The pulse fell to 96; the urine increased in quantity, and was loaded with sediment consisting of membranous flakes and urate of ammonia. From this time the boy did well.

Dr. Bennett states, that he regarded the cerebral affection as de-

pending on insufficient elimination of urea; and remembering the alleged influence of Colchicum over this secretion, he gave it in combination with diuretics. The result was so speedy, that the question may naturally be asked whether the benefit was not due to a spontaneous crisis.

Edinburgh Monthly Journal, August 1851.

ART. 6.—*On the Value of Local Treatment in Traumatic Tetanus.*
By Mr. EDDOMES.

(*Medical Gazette*, May 2, 1851.)

[Mr. Eddomes narrates the case of a man in whom tetanic symptoms supervened upon a wound of the thumb with a packing needle. The symptoms came on three days after cicatrisation. The treatment consisted in removing the cicatrix, and applying morphine to the wound. A blistered surface was also made in the opposite hand, which was also sprinkled with morphine. He stated that the spasms never became general, and that the stiffness of the jaws did not entirely subside till the eleventh day. The author appends the following remarks:]

There are many points of interest in this case, and I would wish to call attention to one or two of them.

1. *This man's symptoms first came on after the healing of the wound,*—a circumstance by no means unusual, though I am not aware that any reasons have been given why such should be the case. I think that one of Dr. M. Hall's experiments, showing that the extreme terminations of nerves possess the excito-motory power in a much higher degree than the trunk, will help us to furnish an explanation. "If" says he "after removing the head of a frog, we divide the integuments along the back, and raise them by means of the forceps, we observe the *trunks* of many cutaneous nerves. Now, if we irritate these trunks, no movements follow; but if we irritate the cutaneous texture on which they ramify, movements of a *very energetic nature* are produced." Now, in the healing process of a wound it must be evident that the extreme distributions of the cutaneous nerves would only be involved when that process was nearly or wholly completed. And may it not be the involving these, the more easily excited terminal branches, that is the starting point of the disease; Another point of interest in this case is—

2. *He had spasm of the wounded hand and arm as one of the earliest symptoms: it continued throughout, and at last was the only remnant of the disease.*—This condition is not a reflected one, but the result of disease in the reflex or motor nerve; while, on the other hand, the trismus, with the affection of the abdominal muscles and legs, are reflected, resulting from injury to an incident or excitor nerve. Had the spasm been a reflected action, we should have had the opposite extremity affected in a similar manner; and it would not have occurred till later in the disease. I merely mention this as being a curious and interesting circumstance, showing that the injury to a reflex nerve is

more persistent, and less easily influenced by remedies, than an injury to an incident nerve.

3. *The treatment of traumatic tetanus.*—It is needless to say what a formidable and intractable disease it has always been found; but I believe that the ill success has in some measure resulted from not acting upon proper principles in the treatment. Look over the melancholy records of this affection, and what has been the treatment? Venesection, narcotics, antispasmodics, mercury, cold bath, warm bath, and a hundred other plans,—all given to affect the system *generally*; while the seat of irritation, the primum mobile of the disease, is entirely passed over, or receives only a secondary share of attention.

I would suggest that such plan of treatment is most unphilosophical, and that the treatment should *begin* at the seat of irritation, to allay which should be our first and most strenuous effort.

In conclusion, I would remark that, in the treatment of the present case, all I claim is, that it is simple and rational. Is it not simple to apply a soothing remedy to an irritated part? Is it not rational, when a *morbid stimulus* is transmitted from one extremity of the spinal cord, to be reflected on the system at large, to transmit a *sedative influence* to the spinal cord at the opposite extremity; a morbid stimulus from the left hand, and a sedative influence from the right, meeting at the same portion of the cord.

ART. 7.—*Treatment of Tetanus by Chloroform Frictions.*

[As another instance of the value of local treatment in tetanus, we may mention a case recorded in the 'Union Médicale,' by M. Morrisseau.]

A man, æt. 40, of sound constitution, wounded himself with an axe on the front of his leg. The wound healed on the fifth day, and the next day tetanic symptoms occurred.

The treatment adopted was friction with one drachm of chloroform over the limb, three times a day, and the patient was placed in an acidulated vapour bath. Next day an improvement had occurred; the patient perspired freely, and slept well; he was also able to swallow better, and the paroxysms were shorter and less violent. The dose of chloroform was augmented and persevered in for five days, when all tetanic symptoms had subsided.

L'Union Médicale, and Prov. Med. and Surg. Journal.

ART. 8.—*Obstinate Sciatica Cured by Inoculation with Morphia.* By CHARLES BRACKETT, M.D.

(*North-Western Medical and Surgical Journal, Sept. 1851.*)

[Narcotic Inoculation in neuralgia was some time since proposed by Mr. Rhynd, and carried into effect by means of an instrument which he devised. The following seems to be a trustworthy

case, and exhibits the benefits of the treatment in a very advantageous light:]

The patient, æt. 50, of a spare habit, but large and muscular frame, and active disposition, had suffered for the past ten or fifteen years with occasional rheumatic attacks, affecting generally his upper though often his lower extremities and back. The pain, and weakness in his back, and in the course of the sciatic nerve for the past two years, had been persistent, so that he needed the aid of a cane when walking; for the past few months he had been confined to his bed, suffering such pain as only the victim of neuralgia has a knowledge of. The author had tried most of the medicines which could give him relief, both in the form of internal and external medication; at length he concluded to try this plan of inoculation.

He began about the origin of the nerve, and inoculated the paste morphine and castor oil, about every four inches, down to his heel, which was as far as he felt any pain. That night he rested better than he had for a long time previously, the pain being entirely removed along the track of the inoculations; towards morning the pain attacked the anterior tibial nerve, where previously it had never existed, and where it became as acute as ever it had been on the posterior part of his leg. The author followed this pain up with scarifications, putting in as much of the paste as he dared do in from four to six punctures made with the point of a thumb lancet at each place of inoculation. At this time he made the points of inoculation about three inches apart from the knee to the middle of the dorsal surface of the foot, so far as the pain existed; it ceased, and at his next visit it had appeared in the plantar nerves. He next scarified and inoculated the sole of his foot, and from that time till his death he never suffered from any pain about that leg.

SECT. II.—DISEASES OF THE RESPIRATORY SYSTEM.

ART. 9.—*Observations on the Form and Movement of the Chest in Phthisis.* By RICHARD PAYNE COTTON, M.D.

(*London Journal of Medicine*, July 1851.)

[An absence of symmetry in the thoracic parietes is generally considered a necessary sign of consumption; but the author, believing this to be a serious error, and likely to lead to mistakes in diagnosis, has recorded the following observations, commencing with remarks on the relation of the form of the chest to the development of consumption. He says:]

The form of the chest has little to do primarily with this disease, for it is equally common to see phthisis attack persons with well proportioned chests, as those which are malformed in that respect. The life-guardsmen, the blacksmith, the pugilist are, *cæteris paribus*, as

liable to the inroads of phthisis as the mechanic: the truth being, that in every instance the origin of the disease is not to be attributed to any peculiar configuration of chest, but to the circumstances under which such conformation has arisen; the impure atmosphere which has been breathed; the excesses which have been indulged in; or the inherited scrofulous taint. It is even questionable whether the practice of wearing stays has not been unjustly accused as a cause of phthisis in females. M. Louis considers popular belief on this subject as nothing more than matter of assertion, wholly unsupported by proof; and the very circumstance of consumption being so much more prevalent in London amongst males than females, might be fairly used as an argument against it. Without doubt, this habit, which fashion has so mistakenly inflicted upon women, has its penalties; but phthisis can scarcely be included in the list.

Continued observations upon phthisis in all its multiform characters, have led me to the following conclusion:—that the best-formed chests afford no security against the onset of the disease, whilst those which are comparatively ill-developed, or even deformed, do not appear, on that account, more liable to become the seat of tubercle.

[The author now passes on to some remarks upon the form of the thorax as influenced by phthisis in its commencement and progress; and gives a brief reference to the relationship existing between phthisis and tubercle. This we omit. He then continues:]

We will assume that the disease has fairly reached its *first* stage, and that the tubercular deposit is sufficiently abundant to interfere with the proper functions of the lung. In what manner is this exhibited by physical signs? Are the form and movements of the chest necessarily altered? These are questions which cannot be answered by an appeal to individual cases, on account of the well known Protean character assumed by the disease, and are only to be met by continued observation upon such a scale as an hospital, like that at Brompton, can alone afford.

As a general rule, the form of the chest is unchanged, and the action of its two sides is symmetrical. In a few instances, there is a slight bulging over the diseased part, but, owing either to its rarity, or the shortness of its duration, it is not very often to be detected. Auscultation and percussion are now the sole guides to the condition of the lungs—points, however, upon which it is not my present object to enter.

I have always been aware that such a statement may be met by the very plausible argument, that directly the apex of a lung becomes tubercular, it must necessarily lose some of its capability of being expanded; and, as a natural consequence, the portion of the thoracic walls corresponding with the seat of the disease, must undergo a change in form, and be less moveable than the opposite side. But I think it can be shown how it happens that, in most cases, neither of these alterations are immediately apparent, and that the chest may retain, for a time at least, its healthy form, as well as its long-accustomed habit of equal and simultaneous motion.

There are two ways by which it does so, viz.:—1. The movement of the healthy side becomes diminished to the same extent as the other,

so that the ordinary breathing, instead of being partly costal, as we find it in health, is almost wholly abdominal. 2. The pulmonary cells in the immediate neighbourhood of the tubercular deposit become enlarged, and by increased capacity for air, compensate for those which are disabled.

The first is less common than the other, but its occurrence may be witnessed in certain cases (of which I have seen many examples), where, although it is evident from other signs that one lung only is affected with tubercle, the thoracic movement upon both sides is small but equal, except on very deep inspiration, when the diseased side is less-raised than the other. The second may be seen in the many cases of early phthisis, in which the respiratory sound upon the diseased side is actually louder than on the other, and in the still more numerous instances, in which the murmur at the tuberculous apex is scarcely audible in some points, and morbidly loud in others; both of which conditions must be familiar to every experienced auscultator. It is probable that the first takes place in cases where *miliary* tubercle is scattered throughout the greater part of the lung's apex; and the second, where the tubercular deposit is in somewhat larger masses, and accumulated in particular spots.

The occasional bulging over the diseased part, first observed by Dr. Chambers, is yet additional testimony in favour of the second explanation; for when the portion of the chest so altered is percussed, it is often found to be more resonant than the healthy side, apparently in consequence of an extreme degree of enlargement of the pulmonary cells, amounting to emphysema,

But, after a time, which varies very much in different cases, circumstances are entirely changed; the diseased portion of lung *begins to contract*, and the thorax undergoes an alteration in form, not only in the region of the clavicles, but in its whole contour. M. Fournet referred this contraction to secondary pleurisy; Dr. Stokes has attributed it to atrophy of the lung; and Dr. Walshe has added to these, the contraction of plastic matter exuded into the pulmonary tissues. It is probable that these different causes are sometimes associated; but one or more of them must be present, before the form and action of the chest can be materially interfered with.

In the majority of phthisical cases, their effects begin to appear towards the middle or latter end of the first stage; but examples are sufficiently numerous of their being completely absent until softening has commenced.

I shall describe the several changes which are thus produced, as they are seen when in their extreme; premising that the greatest variety will be met with, both in the rapidity and extent of their development.

The vertebræ of the neck and back are inclined forwards, and the shoulders are rounded; the front of the chest is consequently contracted, and the stature of the body lessened, giving an awkwardness to the whole appearance, difficult to describe, but which any one accustomed to the external aspect of the disease, would at once refer to the *tubercular chest*. If the patient be looked down upon whilst he is sitting, two curves are distinctly visible; the one affecting the

whole line of the cervical and dorsal vertebræ, the other crossing it, and formed by the two shoulders inclining forwards. A depression is visible beneath one or both clavicles, giving to these bones the appearance of prominence; and posteriorly, the supra-scapular region over the diseased part is more or less sunken inwards. During ordinary breathing, either there is no costal movement whatever at the upper part of the chest, or there is a difference in its extent upon the two sides; and, on forced respiration, instead of the peculiar *swelling* movement of the infra-clavicular regions which is so characteristic of health, either one side is elevated more than the other, or the entire chest is raised, as it were, in one mass, without being perceptibly increased in the antero-posterior diameter of its upper part. These latter changes are more conspicuous in females than in males, as the healthy respiration in our own sex is principally abdominal, whilst in females—owing to the restriction of stays, or for reasons which the obstetrician is the best able to appreciate, there is greater freedom of movement in the upper ribs, and the breathing is, to a much greater extent, costal.

The loss of symmetry and healthy movement takes place simultaneously; so that, unless there is some depression in the clavicular or supra-scapular regions, there will be no diminution in the ordinary movements of these parts. M. Fournet was, I believe, the first who drew attention to this circumstance; and I have certainly never seen an exception to it.

The changes above described may occur at any period of phthisis, from that antecedent to softening, to that of large vomicæ; but they are very capricious guides to the actual stage of the disease; for persons with cavities in the lungs very often are less altered, in these respects, than others who have scarcely entered the second stage. The different amount of pulmonary contraction which must accompany different cases, will at once account for these varieties.

From the preceding observations, I think it must be evident that inspection and mensuration of the chest can seldom afford assistance in the diagnosis of *incipient* phthisis; although, as the disease advances, they may prove useful auxiliaries to other physical signs. But when it is remembered that a departure from strict symmetry is occasionally seen in healthy persons, as a consequence either of a congenital peculiarity, or of certain pursuits which influence the development of the thorax, it is obvious that much caution is always necessary in their employment.

ART. 10.—*Remarks on the Pathology of Phthisis Pulmonalis.*
By Dr. S. T. SPEER, Cheltenham.

(*Medical Gazette*, June 13, 1851.)

[The present remarks are introductory to an excellent paper on the early signs of phthisis pulmonalis, but as they are not only important, in a pathological point of view, but opposed also to the opinion of many of our best authors, we have given them in a separate article. The author observes:]

Before, however, considering in detail the peculiar signification to

be derived from such and such a sound heard in the lung at a period when the invasion of phthisis appears imminent, it may not be out of place briefly to consider in what the essence of the disease really consists, and whether its varied phenomena, physical and symptomatic, are one and all to be attributed to that which is so generally conceived to be its first and real cause—viz., the presence of tubercle in the lung. I confess that such is not my view of the pathology of pulmonary consumption in the widest acceptance of the term. That tubercles do exist in the large majority of cases, characterised by all the symptoms of the disease, is undeniable; that they are the *primum mobile*, or promoter of such symptoms, is, to say the least, extremely doubtful. I am, on the contrary, inclined rather to consider this affection as a scrofulous inflammation of the lung, and to attribute its symptoms to the ordinary results of this process, modified by the peculiar products, which, in the majority of cases, are the results of this peculiar form of inflammation.

It has been asserted by many writers (and more especially by some of the most eminent of the French pathologists) that in no case can tubercles be considered as the product of inflammation; and M. Louis, in his able work on Phthisis, has brought forward numerous examples to prove the fact. On careful consideration, however, of these cases, it would appear that he has merely proved that an ordinary inflammation, whether of the bronchial mucous membrane or of the pulmonary parenchyma, never tends to the deposition of tubercle. It is needless, however, to say that inflammation is not a process limited to one exact type; true, in its usual form, it proceeds generally to the formation of healthy pus, or organisable lymph; but, on the other hand, are not the rheumatic, the gouty, and the syphilitic inflammations, each marked by products of a different character, and by a variety in their symptomatic phenomena? and are we not, then, at liberty to assume that there exist certain conditions of the body of an inferior grade of vitality, with a tendency to a corresponding type of inflammation equally characterised by a similar grade of action, giving rise to the production of a deposit incapable of complete or further organisation? Such appears to be the case as regards the deposition of tubercle in very many instances. Not but that, on the other hand, it may happen that this peculiar inflammation will sometimes go on to the destruction of the tissues involved by suppuration and disintegration, while after death no trace of tubercle can be discovered, but only that peculiar kind of product which, in other parts of the body, is denominated scrofulous pus.

Upon this point I may venture to quote the following apposite remarks from so eminent an authority as Dr. Graves. He says:—“The most important thing for the student to impress on his mind with regard to all cases of phthisis is, that the pectoral symptoms, of whatever nature they be, are caused by scrofulous inflammation. If you trace the phenomena of external scrofulous abscesses, you will be struck with the close analogy they bear in their manner of appearance, their progress and termination, to the ulceration of the lungs. The same slowness; the same insidious latency; the same gradual solidification and gradual softening; the similarity of the puriform fluid secreted

in each; the analogous occurrence of burrowing ulcers and fistulous openings; the close approximation in the form of their parietes, and the difficulty in healing remarked in both, make the resemblance between them extremely striking." Again, he says,—“I mentioned before that one of the first morbid changes we generally see arising from the scrofulous habit is the formation of tubercular matter. I have also alluded to another of these morbid changes—namely, the production of scrofulous pneumonia, in which we cannot detect the existence of a single tubercle. There is another process in which the scrofulous inflammation is seated in the bronchial mucous membrane. This latter form of phthisis is sometimes associated with phthisical pneumonia, but it often exists without it. Although in this disease the inflammation is seated in the bronchial mucous membrane, it differs very much from common bronchitis: its symptoms are different; it does not run the same course; and it is unlike common bronchitis in its termination and cure: its fever presents all the material phenomena of phthisis—emaciation, and frequently the same incurability; the same means tend to its aggravation or benefit, and the same scrofulous pus is secreted.”

Now, if we admit the existence of these different forms of scrofulous disease affecting the lung, either separately or (what is more commonly the case) in conjunction,—namely, scrofulous inflammation leading to the deposition of tubercle; scrofulous inflammation (pneumonia), in which no trace of tubercle is found after death; and scrofulous bronchitis, in which a characteristic purulent fluid is found filling the tubes;—allowing, I say, these three forms to exist, and that either of them may, at its origin, prove to constitute the incipient stage of phthisis, we have then some clue to the diversity in those morbid physical phenomena which are collectively supposed to indicate the disease without specifying its peculiar form; for while the general symptoms may, in all probability, be nearly identical, it is obvious, from the different pathological conditions which must exist in these three varieties, that a corresponding difference in the physical signs must necessarily be present. Thus two cases, equally deserving of the term phthisis, as meaning a wasting away, with destructive disintegration of the pulmonary tissues, may, in reality, afford a difference in the progress and existence of such signs (more especially at their commencement) in no way to be accounted for but by the admission of a pathological difference in the morbid processes at work in the two cases.

The foregoing observations are made in the conviction that the disease called phthisis pulmonalis is in reality a scrofulous inflammation of the lung; that it is, in the large majority of cases, accompanied by the deposition of tubercles; but that in certain forms of the disease (especially in elderly persons) this is by no means invariable; and that when present, they are the product, and not the real cause of the disease; since all the characteristic symptoms of scrofulous inflammation are identical, whether true tubercle be thrown out or not—viz., low fever, quickened pulse, emaciation, hectic perspirations, diarrhœa. To be satisfied of this, we have but to compare a case of hip-joint disease in its progress from first to last with one of pulmonary consumption: the analogy will be indeed evident.

It is, however, true that sometimes the deposition of a considerable

amount of tubercular deposit may take place in the lung, preceded merely by simple congestion or capillary hyperæmia,—a condition supposed to be always present by Vogel and by Engel; the latter, however, limiting the influence of inflammation to the production of infiltrated tubercle. May not, however, this deposition at so early a stage of the inflammatory action be merely a proof that there exists in persons of an eminently tubercular diathesis a step short of actual inflammation (viz., simple hyperæmia sufficient in itself to provoke the deposition of tubercle from its blood-vessels; whilst in others the process must attain its ultimatum—the true inflammatory condition (of a scrofulous type)—before the characteristic deposit of such type becomes manifest.

Again: it is often alleged that the fact of tubercles (isolated or in masses) being not unfrequently found in the lungs of persons dying of other diseases, in whom the parts occupied by these tubercles, and surrounding them, were to all appearance healthy, is a proof of their deposition being independent of any inflammatory process. I have myself frequently seen tubercles in the upper part of the lung, lying apparently inert surrounded by healthy tissue; no symptom of inflammatory degradation being appreciable: but the absence of such appearance by no means satisfied me that an early stage of inflammation—viz., hyperæmia—had not preceded the deposition; it rather goes to prove that tubercle does not produce of itself any change in the surrounding parts, and that the suppuration and disintegration of the pulmonary tissue found around it in cases of phthisis, are in no way a necessary consequence of irritation produced by the tubercle, and may exist totally independent of its presence.

The appearance of tubercle without any trace of inflammation in its vicinity is, as I said before, no proof of the absence of such process at the time of its deposition. In assigning inflammation, however, as the *avant courier* of these latent products, I allude simply to its most incipient stage—that of local excitement, with increased flow of blood, but without organic change; and consequently the absence of any indication of such process is explicable upon the following supposition:—That (in persons who, after death, presented evidence of latent inert tubercle), owing to a combination of depressing causes greatly lowering the vital powers, a condition of simple irritation or congestion was sufficient to give rise to the deposition of a certain amount of tubercular matter from the vessels of the congested part; and that these vessels, once freed from this material, and the predisposing causes giving rise to its formation in the blood having ceased; returned to their former condition without any advance in the morbid process, which, owing to a combination of circumstances, had at so early a period been sufficient to permit of its exit from the pulmonary capillaries. Should, however, its elimination require a process of a more advanced type for its accomplishment—viz., actual inflammation—we at once see how the peculiar symptoms of phthisis may become manifest. In the first instance the morbid action ceased upon the deposition of the tubercle; resolution took place, and the substance remained inert: in the second, the usual results of inflammation fol-

lowed or accompanied such deposition—namely, suppuration and ulceration of a modified type, not, indeed, resulting from the presence of the tubercle, but from the fact that the process having now attained the inflammatory stage, the ordinary consequences of inflammation will of necessity occur, whether tubercle be thrown out or not: these consequences—the suppuration and ulceration, and not the tubercle—leading to the softening and destruction of the tissues in which the latter has been lodged.

Lastly, if tubercles are to be considered as the primary cause of the irritation, inflammation, and other symptoms which are presupposed to occur subsequent to its deposition, there is some difficulty in understanding why the lung, and especially its upper lobes should be so peculiarly obnoxious to their existence; but if we allow a state of hyperæmia to have preceded their deposition, the difficulty is, in a great measure, removed; for, in the first place, it is only necessary to bear in mind the delicate structure of the lungs allowing the easy exudation of the *materies morbi* through the thin texture of its capillaries. The mass of blood which passes through them as compared with other organs; the chemical changes in that fluid which take place here, and here alone; the abundant formation of fibrin (of which tubercle is but an inferior form); and, to add to these conditions, the fact, that of the different organs in which tubercles are found, the lungs alone are subject to those external peculiarities of atmospheric vicissitudes, so fertile in inducing an irritable congested state in tissues of so delicate a texture. Abrupt changes of temperature are universally allowed to favour the development of pulmonary affections, and more especially of phthisis, in persons predisposed to the disease: but surely it must be by the variety in the intensity of stimulus afforded to the pulmonary tissues, producing an excited irritable condition, and thus leading to the deposition of tubercle, rather than by any specific action possessed by such atmospheric influences in promoting its deposition, independent of a preliminary morbid process, however slight.

The above considerations may serve to explain the reason for tubercular matter being so generally found to preponderate in the lungs; its choice, however, of the upper lobes is more obscure.

Now it is well known, that tubercle may be deposited with little, if any, derangement in the circulation of the part; but when this does occur, the deposit assumes the form of crude yellow tubercle from the first, without having been preceded by the grey miliary induration, from which, in the majority of instances, it appears to have been formed. But this primary form of crude yellow tubercle which appears to be so independent of any preliminary irritating process, is not that which is found to predominate in the upper lobes; it is the miliary tubercle and the grey induration which are so common in these parts of the lung in the earlier stages of phthisis; and these latter conditions being undoubtedly the result of a low grade of inflammation, the question is, not why the upper lobes should be so liable to this deposition, but why they should be more particularly so, to that species of inflammation which gives rise to it; since (notwithstanding

the frequency of ordinary pneumonia of the lower lobes, and also of one form of bronchitis—the capillary) it is certain that the upper portion of the respiratory apparatus is far more liable to irritation, congestion, and inflammation of one kind or another.

In the first place, these upper lobes are the seat of a higher degree of activity in the respiratory process; the louder character of the murmurs is one indication of this; but this superior activity of function is also a sign of a corresponding activity in the circulation of these parts. This alone would render the upper lobes more keenly susceptible to the irritation of external stimuli, independent of the existence of a tubercular diathesis; but as this condition of the system has the effect of implanting a lower degree of vitality and proportionably diminished powers of reaction in all the tissues, it is plain that those of the upper pulmonary lobes must now be still more incapable of resisting with impunity the varied sources of irritation to which they are liable. Another reason tending to account for this susceptibility is found, I think, in the opinion of Broussais, that in these parts the bronchial tubes are shorter, and allow the external sources of irritation to arrive more readily at their termination. This argument certainly holds good with respect to the atmospheric air, if its temperature be low or variable, since owing to the shortness of the space which it has to traverse, it cannot have its temperature increased or assimilated to that of the surrounding parts, so readily as when it has to attain the more distant portions of lung. Again, in spite of the superior activity of the respiratory function in the upper lobes, it is in these that the least amount of assistance to the alternate expansion and contraction of the lung is afforded by the movement of the thoracic parietes, the deficiency requiring to be compensated for, by an increased action in the lungs themselves; and that such an active condition of certain of the pulmonary tissues does occur, independent of the movements of the thorax, has, to my mind, been satisfactorily shown by the elaborate researches of Reissenen and others. Lastly, this diminished mobility may, according to Dr. Williams, act in another way; he says,—“the smaller capability of motion possessed by the upper lobes of the lung, may have a share in disposing them to become the seat of tubercular matter; not by permitting it to accumulate, but by favouring bronchial obstructions to the respiration, and causing local congestions of blood, which may promote the formation of tubercles.

[The following propositions serve to embody the views entertained by the author upon this subject:]

1st. That the tubercular and scrofulous diatheses are identical.

2d. That inflammation of the pulmonary substance is modified by this diathesis; its products being either scrofulous pus or what may be termed scrofulous lymph or tubercle; both these products being possessed of an inferior degree of organisation.

3d. That in the great majority of instances, the earliest phase of phthisical disease is ushered in by local excitement of the air-vesicles and smaller air-tubes.

4th. That this local excitement differs essentially from the analogous condition existing at the commencement of an ordinary sthenic in-

flammation, in its gradual supervention, its difficulty of recognition, and its slowness in passing into a more advanced stage.

5th. That all the symptoms of phthisis are the result of scrofulous inflammation of the lung, whether pus or tubercle be thrown out, or both.

6th. That, where the tubercular diathesis is very strongly marked, tubercle may be deposited, as the result of a very trifling amount of local irritation.

7th. That in a large number of cases it is not deposited till the morbid process has attained the true inflammatory stage.

8th. That the auscultatory signs of incipient phthisis may be divided into—1st, those which occur in cases where the tubercle is thrown out simultaneously with or subsequent to the local excitement; 2dly, those in which it is not deposited till the stage of excitement has become merged in actual inflammation of a specific character.

Lastly. That incipient phthisis may present all its characteristic symptoms before any tubercular matter has been hitherto eliminated.

ART. 11.—*On the Early Signs of Phthisis Pulmonalis.*

By Dr. S. T. SPEER, Cheltenham.

(*Medical Gazette*, June 13, 1851.)

[It will be seen in the preceding article that the author considers phthisis to be a scrofulous inflammation, with a deposit of tubercular instead of exudation matter. He therefore considers, that the first stage of the disease is not that in which the deposit has commenced, but that of the prior vascular excitement. With these views he says, in reference to the physical signs:]

If an individual, then, presents himself having an hereditary well-marked strumous diathesis, and complaining of certain general symptoms of a suspicious nature, the following alterations of the murmurs in the upper lobe of either lung may (if permanent) indicate that there exists some bronchial irritation, which, if not arrested, may lead to a morbid condition of a more advanced and intractable type.

Respiration.		Adventitious sounds.	Percussion.	Voice.
Inspiration.	Expiration.			
Diminished in length, increased in loudness, and rather abrupt.	Slightly increased both in length and loudness.	None.	Normal.	Normal.

But it may happen that, instead of the smaller air-tubes alone being first affected, the terminal vesicles and their intervening tissue are the seat of irritation, with or without a similar condition of the neighbour-

ing tubes; in other words, that the early stage of scrofulous pneumonia may precede the deposition of tubercle without the accompaniment of scrofulous bronchitis. That this may be the case is as certain as that ordinary pneumonia may (at its origin) exist without any bronchitic complication. In early phthisis, however, I believe this to be more rare. Local excitement of the air-tubes may exist alone, or in combination with a similar condition of the parenchyma; but a primary affection of this latter alone is, I think, of less frequent occurrence,—when present, it nevertheless affords some evidence of its existence.

The first stage of ordinary pneumonia is usually stated to present the following morbid appearances:—The diseased part presents a darker red colour than in health, and crepitates less; if cut, an exudation of frothy bloody serum, more or less abundant, takes place. The vesicles still contain air: some are already obliterated, all are more or less obstructed. This pathological condition was designated by Laennec as the first stage of pneumonia; but these changes already indicate a considerable departure from a healthy state, and that between a healthy lung and one such as above described, there must have been some transition phenomena. This, indeed, is the opinion of that able auscultator, Dr. Stokes, who properly considers the first stage of pneumonia, according to Laennec, to be in reality the second stage, or that of sanguineous congestion; the actual condition of the affected tissues in the first stage being simply one of local excitation, indicated by a puerile sound of respiration in the part itself. Now I believe that, in some cases of very early phthisis,—when, in fact, the disease appears rather to be hovering over its victim than to have struck it,—a condition of the parenchyma exists, analogous in character (but not in its progress or results) to the primary change which takes place in ordinary pneumonia,—namely, a local excitation of the air-cells and of the minute tubes entering them, and that this may give rise to the same physical sign—an exaggerated respiratory murmur in the affected part. I am fully aware that this kind of breathing is always supposed to denote disease existing in some other portion of lung, and that it merely indicates an increased amount of activity in a healthy part, rendered necessary by the inactivity and loss of power in the diseased one. I do not, however, entirely participate in this opinion with regard to every form of exaggerated respiration, especially when it occurs in the same lung in which more evident indications of disease exist, and this for the following reasons:—That, in ordinary pneumonia limited to a small portion of lung, there is generally audible, at the edges of the affected portion, an exaggerated respiration,—*i. e.*, in one spot we may have crepitating râle, slight dullness, feeble respiration, and, in close proximity, a loud puerile breath sound. Now I can scarcely imagine it possible for this loud breathing to be the result of an act of compensation in the tissue immediately adjoining; it presupposes that the limits of the disease are distinctly marked out by some boundary, beyond which there exists a perfectly healthy condition of the lung. It, however, happens that this exaggerated respiration is often the prelude to an extension

of the disease, its locality becoming usurped by signs which actually indicate such extension.

These two circumstances—first, the improbability of a portion of lung immediately adjoining a diseased one, being so healthy as to be able to perform more than its ordinary amount of function; and secondly, the frequent invasion of this supposed healthy part by the signs of the disease which exist in its immediate vicinity—render it, I think, far more probable that the tissue presenting the exaggerated breathing is no longer in a normal condition, but rather in a state of local excitation; and that it is to this excitement—whether occurring primarily, or as the result of an extension of disease—that the exaggerated respiration is due.

[We pass over the author's solution of the difficult question of the *modus operandi* of this condition in causing exaggerated respiration, and proceed to his account of the phthisical signs of tubercular inflammation.]

Scrofulous or tubercular inflammation of the lung (according to whether it be accompanied by the deposition of tubercle or not) may be divided into three stages—1st, of Congestion; 2dly, of Inflammation; 3dly, of Induration. The first of these is that condition which succeeds to the existence of localised excitation still unsubdued; and, in the following table, the physical signs which reveal these different stages are arranged in the order in which they usually occur:—

PHYSICAL SIGNS OF TUBERCULAR INFLAMMATION.

Stage of Congestion.

Respiration.		Râles.	Voice.	Percussion.
Inspiration.	Expiration.			
Intensity and duration both diminished.	Intensity natural; duration increased.	None.	Normal.	Slightly damped.
Both murmurs rather harsh and dry.				

Stage of Inflammation.

Respiration.	Râles.	Voice.	Percussion.
Character of the murmurs the same as above.	Small crepitation occasionally audible.	Slightly resonant.	Dullness commencing.

Stage of Induration and Atrophy.

Respiration.		Râles.	Voice.	Percussion.
Inspiration.	Expiration.			
Shorter, but becoming louder than before.	Longer and louder.	In some spots the same crepitation may still be audible; but it often happens that no adventitious sound accompanies the murmurs.	Bronchophonic.	Dull and resistant.
Both murmurs rough and metallic, with tubular character in the expiration.				

These three stages of scrofulous inflammation of the lung are all to which it is necessary to refer; inasmuch as the succeeding ones—namely, suppuration, ulceration, and the formation of cavities—are connected with the more advanced periods of phthisis. My present purpose, however, is simply to consider the pathological conditions of its early stages, as independent of the presence of tubercle in very many instances; and to endeavour to show that, even when present, they play but a secondary part, whether in the production of the general symptoms or physical signs afforded during the progress of pulmonary consumption; while in many cases of the disease, especially as met with in the latter periods of life, they are entirely wanting—at least, in the solid state.

The process of tubercular inflammation presents certain varieties in its physical signs, as indicated in the preceding table. In the first two stages this difference is not strongly marked, being of one degree. In the third, however, these signs are most distinctive, and (as in the case of bronchial and vesicular irritation) may all be explained by reference to the condition of the affected tissues.

When a portion of the pulmonary substance has been for a length of time the seat of augmented excitability or irritation, it tends (unless this irritation be removed) to depart still further from the healthy condition. Hitherto there has been preternaturally active circulation existing in the part; but the continuance of this, gives rise to the following changes:—Its blood-vessels become more and more distended by the increased flow; their elasticity is diminished, and they become crowded with an unusual number of red corpuscles. Of these, some still move onward in the current of the circulation, while the majority remain stationary: at the same time the capillary vessels not only are distended, but elongated. Such are the changes which take place in a part hitherto the seat of an unresolved irritation, and, if we suppose this part to be the membrane lining the air vesicles, the physical signs attributed above to that stage of scrofulous inflammation characterised by this condition are thoroughly explicable.

The parietes of the pulmonary air-cells are formed by a membrane, the nature of which is not satisfactorily ascertained; it is probable, however, that it partakes more of the serous than the mucous character, and is equally liable to be affected by the same exciting causes of irritation. As long as this latter condition exists, there is (as before stated,) increased amount of blood, augmented rapidly in its flow, and a corresponding increased functional activity. Should this last for any time, a change will soon take place in the membrane forming the parietes of the vesicles. The rapidity of the local circulation, hitherto greater than natural, is now much diminished; even below the natural standard. In some of the vessels the blood still moves, in others it stagnates; their elasticity has been destroyed by over distension, from the crowd of red corpuscles blocking them up, and they become elongated and tortuous. Such a condition of the vesicular membrane must, it is evident, produce its effects chiefly upon the dimensions of the small cavities of which it forms the boundary. These cavities, or air-cells, are, therefore, not only diminished in size by the increased thickness and tumefaction of their walls, but the freedom with which they admit the inspired air is also lessened by the obstruction which is thus presented to their ordinary dilatation, as well as by the pressure which is exercised outside of them by the distended plexus of capillaries of the intervesicular areolar tissue. This obstruction to the entrance of air, combined with the greatly diminished capacity of the cells, involves the admission of a less amount than natural; and hence, upon principles previously stated, the diminution in the length and loudness of the inspiratory murmur.

Upon these grounds, however, it might be supposed that a similar change should take place during expiration. This, however, is not the case; true, it still continues feeble; but this arises simply from the fact that no portion of the lung has, as yet, become a sufficiently good conductor of the murmurs, (independent of their intrinsic weakness.) Consequently, the expiratory murmur, while its intensity is scarcely above the natural standard, is much lengthened, owing to the diminished reactive power of the swollen vesicles. These, having lost much of their usual elasticity, contract upon their contents with less force and rapidity than they are wont to do when in health. The air having thus to find its way out of tissues presenting an obstacle to its exit, and the assistance afforded by the elasticity of the vesicles being diminished, the process of expiration and its accompanying murmur are necessarily much prolonged.

With such a condition of the vesicular tissues of the lung, any explanation relative to the harsh dry character, and sensation of difficult production which the murmurs now present, would be superfluous. But there is another physical sign, which, though not of an auscultatory nature, may be here, nevertheless, alluded to, since it is sometimes to be appreciated even at this early stage, and is, I think, liable to misinterpretation; I allude to a shade of dullness on percussion which I do not conceive, under these circumstances, to be owing to the presence of tubercles; it is too diffused, too slight in degree. Tubercle, when existing in sufficient quantity to produce dullness,

affords a more marked and resistant character in the percussion-sound; and, when occurring in isolated spots, the diminution of sound is rather the result of a congested condition of the surrounding tissue, which accompanies or precedes such deposition. That this is really the case may, I conceive, be inferred from the fact that we often find this slight diffused dullness to be removable by means which remove congestion; while the more decided dullness of tubercular consolidation is totally uninfluenced by such measures.

So much, then, for the congestive stage of scrofulous inflammation of the lung; its general symptoms are those of incipient phthisis—in fact, it very frequently constitutes the early stage of the disease; but its physical signs are not necessarily the result of tubercular deposition. In the subsequent stage, however, this matter is usually formed; but, even at this juncture, I doubt whether it gives rise to all the physical signs so unequivocally laid down as indicating its existence in a solid state. These signs, it is almost needless to say, are attributed to the unsoftened tubercle, blocking up the cells, opposing the entrance of air, and thus imparting a hard, rough character to the murmurs, an increase in their intensity, from the increased conducting power of the lung, and a dull percussion-sound, from the greater density of the subjacent tissues. Such, indeed, may be the signs of tubercular deposition, when it has become solid; but, with regard to its actual deposition in this form, I am inclined rather to adopt the opinions of Vogel, Carswell, and some of the Parisian pathologists, and to believe that tubercle, when first deposited, is in a fluid state. If such be the case, it is evident that this fluid condition can be but temporary. Were it, however, possible to hit upon the time at which the exudation took place into the air-cells and smaller tubes, I see no good reason for its not affording a sound resembling more or less those which occur when pus or ordinary lymph is effused in the same localities. My reasons for adopting such a view are, I confess, unsupported by any authority, being purely the result of personal experience, which is as follows:—

I have not unfrequently found (in what were, in all probability, cases of incipient phthisis,) a combination of signs indicative of the congestive state of scrofulous inflammation,—viz., feebleness and shortness of inspiration, harsh prolonged expiration, with slight diffused dullness; and that, after the persistence of these signs for an indefinite period, there was heard a minute crepitation, limited to one small space. This has lasted for a variable time—sometimes for a few days, sometimes longer, at others barely thirty-six hours; it has then disappeared, has again recurred in another place, again to disappear. The character of this sound was such as to give the idea of air passing through a glutinous semi-fluid substance; and I am inclined to believe that this short-lived recurrent crepitus is produced by bubbles of air passing through the semi-fluid tubercular matter until it becomes solid; the sound then, of course, ceases, while a fresh exudation in a neighbouring locality may cause its repetition; the period of its duration depending, of course, upon the time which the fluid portions of the tubercle take to be absorbed.

The third stage of scrofulous inflammation is one, the signs of which are constantly met with in earlier periods of phthisical affections; but, as a general rule, they appear almost invariably to be attributed to the agglomeration of a large number of tubercles. Now, it has been my lot to witness (more especially in the Parisian hospitals) cases, which, on dissection, satisfied me that such was, in many instances, a wrong interpretation relative to the physical signs discovered during life, and which, instead of being directly attributable to tubercular consolidation, were rather the result of that stage of scrofulous inflammation of the parenchyma which tends to produce induration of the affected tissues. The patients had died at an early period of the disease, generally from uncontrollable diarrhœa, the result of scrofulous intestinal inflammation; during life they presented general symptoms of incipient phthisis, and after death the upper lobe of one or both lungs was found in the following condition:—It appeared, at first sight, to have been atrophied; this was particularly the case where false membranes existed round its summit. In substance it was harder than natural, and was torn with some difficulty. The vesicular tissue was more or less obliterated, the tubes still open. Its colour varied in different instances, and in different portions of the same lung. In some parts, where apparently the morbid process was less advanced, it was of a dusky reddish hue, in others of a brown or ash colour, while those portions which were most indurated, were of a mottled grey or dirty yellow. In some cases the hardened tissues appeared almost black from the presence of melanotic matter. On cutting into such lungs the same appearances were visible, and the finger rubbed over the cut surface experienced a granular sensation. In some the bronchial tubes contained a thin liquid pus; in others nothing but an increased redness of the mucous membrane was visible; while, in the outskirts of the disorganised portions, the tissues appeared to be in an earlier stage of inflammation. Now all the above changes, it may be said, were the result of chronic pneumonia, and so they, indeed, were; but the patients had presented strong indications of the tubercular diathesis, and, in addition to these morbid appearances, there were found among the diseased parts tubercles scattered here and there. Some of these were in the miliary condition, others had assumed the form of crude, yellow tubercle. But were they in sufficient numbers to account for the physical signs present before death? By no means; had the surrounding tissues been in as healthy a condition as they not unfrequently are (round even a larger amount of tubercular deposition), the modifications of the respiratory murmurs produced by their presence would have been neutralised by the quantity of healthy intervening pulmonary substance. I confess that, at the time, prejudiced in favour of the non-inflammatory origin of tubercle, from a previous attendance in the wards and on the lectures of the celebrated Louis, I had anticipated the discovery of a large agglomeration of tubercular matter, in order to explain the physical signs, which were those I have classed under the head of Induration, or the third stage of scrofulous inflammation of the lung. The amount of such matter actually present was inadequate to produce these signs,

but the chronic inflammatory induration in which they were imbedded was sufficient to explain the mechanism of their production, and at the same time to throw some doubt upon the opinion which assigned to the presence of tubercle so large a share in the production of the physical phenomena of early phthisis.

[Before quitting the subject of scrofulous induration of the lung, the author speaks thus of its differential diagnosis:]

It has been previously stated, that in certain constitutions tubercles may be deposited as the result of a very trifling amount of local excitation. In such cases there is not unfrequently, it is true, found strong evidence of consolidation of one or other of the upper lobes, if not both,—physical evidence, indeed, so strong as to elicit surprise at the want of symptomatic phenomena to account for such a condition. Now, in these cases, I believe the tubercle lies dormant; the process from which its deposition resulted has been resolved, and, consequently, the system no longer sympathises with that, which is not in itself a source of irritation when once its exciting cause has been removed. If persons so circumstanced happen (as they not unfrequently do) to die of some other disease, the autopsy might report, as it often has done,—“tubercles were found in considerable quantity in the upper lobe, without any trace of inflammation, and of which no symptoms (not signs) were afforded during lifetime.” In these cases the absence of irritation or inflammation causes a corresponding absence of symptoms, tending to draw attention to the lungs. If, on the other hand, we find an individual of scrofulous habit or parentage labouring under hectic fever, emaciation, night sweats, cough, and accelerated pulse, dyspnoea, and find on examination that the upper lobes present distinct evidence of increased density, we may be pretty well satisfied that while the probability is in favour of the presence of tubercle, the real cause of the morbid signs and symptoms is the local irritation with which the system is sympathising, and the induration in which the tubercles have been deposited.

There yet remains one more auscultatory sign pertaining to the early stage of phthisis requiring notice, inasmuch as its coincidence with or without the evidences of increased density of the lung, gives it a different interpretation, and indeed, in some cases, a different prognosis, although, for the most part, it is of very unfavorable import. I allude to the sub-crepitant rhonchus, which is more particularly alleged to indicate bronchitis of the small tubes; and no one will deny that its occurrence in the base of one or both lungs posteriorly is a valuable sign of the disease. But this rhonchus is not the same in all cases; and in the summit of the lung two forms may be often distinguished during the incipient stage of phthisis.

The first variety of the sub-crepitant rhonchus consists in the evolution of distinct bubbles, giving rise to a number of irregular moist crackling sounds, succeeding each other more slowly than in the second variety, occurring particularly towards the end of inspiration, but being continuous, more or less, with the expiration.

The second form of the subcrepitant rhonchus is more analogous to the true crepitation of ordinary pneumonia, both in the diminished

size of the bubbles, and their less liquid character. In number they exceed those of the former variety, and, like the crepitant râle itself, they are almost exclusively audible during inspiration.

Now, with regard to this latter sound, I believe it to be the result of that scrofulous form of pulmonary inflammation previously mentioned; and its general occurrence, in my experience, with diminished percussion-sound and increased resonance of the voice, tends to confirm this opinion. But the first variety of subcrepitant rhonchus is liable to two interpretations.

There is, we know, a stage in the progress of pulmonary consumption when the tubercular matter tends to liquefy,—whether by an internal or external process is of but little moment. One thing, however, is certain,—that the presence of the now softened and liquid tubercle produces a moist râle, first described by M. Fournet under the name of humid crackling rhonchus, and considered by him to be direct evidence of the softening of tubercular matter. I confess I have had this sound pointed out to me in the wards where it was first discovered; but, from its unassisted evidence, I have been unable to understand why it should be more connected with such a process than the first variety of subcrepitant râle when limited to the apex of a lung. Both consist of a limited number of bubbling sounds of very similar quality; both are most distinct during inspiration, though likewise audible in expiration; and they both give the idea of bubbles breaking at the summit of a fluid in tubes of similar calibre. The fact, then, that a subcrepitant râle in the apex of the lung merely indicates a suspicious character of bronchitis, and the humid crackling râle, a decided softening of tubercle, appears to be an untenable distinction. The two sounds resemble each other closely, and may be constantly mistaken the one for the other; the so-called humid crackling being nothing but a subcrepitant râle more metallic in quality, and rather sharper in tone, than usual.

There is, however, one point which may lead to the solution of the question as to the probable nature of the sound,—namely, its consideration with reference to time, and its coexistence or not with dullness and resistance upon percussion. A râle of this kind (even if it should be the humid crackling), if heard at a period when the general symptoms indicate a recent invasion of the disease, though limited to the apex of the lung, if unaccompanied by dullness, may, however suspicious its locality, be set down as the result of bronchial inflammation,—probably, indeed, of a scrofulous nature. Let it, on the other hand, occur subsequent to the manifestation of decided dullness, and one or other of the following conditions may be presumed to exist:—either an inflammatory induration of the parenchyma, complicated with a minor degree of scrofulous bronchitis without tubercle, or a similar condition of the parenchyma giving rise to a deposition of this matter in the air-cells and smaller tubes. It is of little consequence whether scrofulous pus, healthy pus, or true liquid tubercle, be the fluid through which the bubbles pass; if the locality be the same, the same sound, a subcrepitant râle will be the result.

[In conclusion, the author observes:]

Such, then, are the conditions of the lung constituting the early phases of pulmonary consumption. I have confined myself almost exclusively to the results of auscultation in detecting them, and am fully aware that some points have not been as fully dwelt upon as they perhaps deserved,—more especially in the latter part. My object, however, has been merely to inquire into the propriety of attributing so large a share in the production of the physical signs of incipient phthisis to the actual presence of tubercle, and whether there be not a condition of the pulmonary tissues preceding or accompanying its deposition, equally capable of affording evidence of its existence by a reference to the altered dynamic condition of the lung.

ART. 12.—*On Cod-liver Oil in Phthisis.* By Dr. WALSHE.

The following conclusions as to the value of the cod-liver oil are taken from the author's recent work on 'Diseases of the Lungs.' He states:—

1. That it more rapidly and effectually induces improvement in the general and local symptoms than any other known agent.

2. That its power of *curing* the disease is undetermined. I mean here by curing the disease, its power of causing, along with suspension of progress, such change in the organism generally as shall render the lungs less prone to subsequent outbreak of tubercles, than after suspension occurring under other agencies.

3. That the mean amount of permanency of the good effects of the oil is undetermined.

4. That it relatively produces more marked effects in the third than in the previous stages.

5. That it increases weight in favorable cases with singular speed, and out of all proportion with the actual quantity taken; that hence it must, in some unknown way, save waste, and render food more readily assimilable.

6. That it sometimes fails to increase weight.

7. That in the great majority of cases where it fails to increase weight, it does little good in other ways.

8. That it does not relieve dyspnœa out of proportion with other symptoms.

9. That the effects traceable to the oil in the most favorable cases are:—increase of weight, suspension of colliquative sweats, improved appetite, diminished cough and expectoration, cessation of sickness, with cough, and gradual disappearance of active physical signs.

10. That in some cases it cannot be taken, either because it disagrees with the stomach, impairing the appetite, (without itself obviously nourishing,) and causing nausea, or because it produces diarrhœa.

11. That in the former case it may be made palatable by association with mineral acid, and in the latter prevented from affecting the bowels by combination with astringents.

12. That intra-thoracic inflammations and hæmoptysis are contra-

indications to its use, but only temporarily so. I have repeatedly given the oil within a day or two after cessation of hæmoptysis, without any return taking place.

13. Diarrhœa, if depending on chronic peritonitis, or secretive change, or small ulcerations in the ilium, is no contra-indication to the use of the oil; even the profuse diarrhœa caused by extensive ulceration of the large bowel is not made worse by it.

14. That the good effects of the oil are, *cæteris paribus*, directly as the youth of those using it,—a singular fact, which probably may one day (when the textural peculiarities of youth and age are better understood) aid in giving a clue to its mode of action. (*Vide Report.*)

ART. 13.—*On Acute Capillary Bronchitis.*

By T. B. PEACOCK, M.D., Assistant-Physician to St. Thomas's Hospital.

(*Lancet*, Aug. 9, 1851.)

Symptoms.—It occasionally happens that, after having suffered from an ordinary catarrh for a few days, a patient is suddenly seized with acute febrile disturbance, together with difficult and hurried breathing, sense of constriction across the chest, and cough, giving the impression that he is becoming the subject of acute pulmonary inflammation; and yet, on careful examination of the chest, no decided evidences of disease may be detected. Perhaps there may be some harshness of the respiratory sounds, more especially on listening at one or both lower dorsal regions, or slight sibilant rhonchus, on forced inspiration, or general feebleness of respiration; but, in many cases, careful examination will elicit no marked physical sign.

If appropriate treatment be at once had recourse to, these symptoms may wholly subside at the end of a day or two; on the contrary, however, if they be not at once subdued, evidences of serious pulmonary disease will soon develop themselves. The febrile symptoms will become more marked, the pulse will be quick and vibratory, the tongue moist, but covered with a thick whity-brown fur, the respiration will be more hurried and difficult, the sense of constriction will increase, the cough become frequent, and be attended by a scanty, pale, glairy expectoration. On listening to the chest there will now be heard, at the lower dorsal region of one or both lungs, a slight crepitant rhonchus, generally with some sibilant sounds in other parts of the lungs, and this crepitation will rapidly diffuse itself over other parts of the chest. It will extend to the upper dorsal regions, and then to the lower parts of the chest laterally and anteriorly, while it will acquire a coarser or more subcrepitant character in the parts where it first appeared. At the same time the chest, so far from yielding a dull sound on percussion, will retain its natural clearness or will become abnormally resonant. The respirations will be shorter and more rapid, the face deeply flushed or livid, the patient will become much prostrated, and will be no longer able to lie in the recumbent position, but will be compelled to be much raised or placed upright in bed. At a still later period the crepitant rhonchus will be audible in all parts of the chest, and with the expiratory as well as

the inspiratory acts, and loud gurgling sounds will be heard at the root of the lungs, and in the vicinity of the larger bronchial tubes. The chest will now be morbidly resonant on percussion, either entirely or in part, the resonance being most marked at the upper and anterior regions, while the lower and posterior may yield a more or less dull sound. The face will be flushed and tumid, the lips purple, and the extremities livid and cool. The cough will be frequent, but not generally attended with pain, and the expectoration will consist of viscid, whitish coloured muco-purulent masses, which, on close examination, will be found composed of small pellets, aggregated together and free from air. Sometimes the sputum will be raised in considerable quantities, but, with the progress of the disease, and the declining strength of the patient, it will become scanty, or altogether incapable of being evacuated. The pulse will be quick and feeble, varying from 130 to 150; the respirations will be short and rapid, from 40 to 60 in the minute, and both the inspiratory and expiratory acts will be performed with great effort. The sense of suffocation will become extreme, and the patient will die asphyxiated in from nine to twelve days from the commencement of the symptoms.

This, we shall perceive, presents a picture of the disease in its most unfavorable form, such as we happily only see in persons who have not been subjected to treatment in the earlier stages, or in those who labour under other serious disease. In the cases which terminate in recovery, the amendment is marked by the respiration becoming freer and less rapid, so that the patient requires to be less constantly propped up in bed; the lividity of the face decreases, the pulse becomes slower and stronger; the cough less troublesome, and the sputum is more readily expectorated, and assumes a diffuent muco-purulent character. The abnormal resonance and dullness of the chest gradually subside, the crepitation ceases to be heard in those parts where it had last become audible, disappearing first in the front and upper parts of the chest, then in the lower regions anteriorly and laterally, and lastly in the dorsal regions. A long period, however, elapses before the physical signs entirely disappear, and when the general symptoms are relieved, some degree of crepitant rhonchus will generally still be heard at the lower part of one or both dorsal regions, and after the subsidence of other evidences of disease, there can usually be detected a general want of clearness on percussion in all parts of the chest, and the inspiratory sound is found somewhat harsher or feebler, and the expiratory sound louder and more prolonged than natural; these signs being the more persistent according to the extent to which the disease has been allowed to proceed before appropriate treatment is had recourse to, so that in some cases permanent emphysema of the lungs and dilatation of the smaller bronchial tubes, giving rise to symptoms of asthma, apparently result from attacks of acute capillary bronchitis which had been neglected in the earlier stage.

Morbid appearances.—In the cases of acute capillary bronchitis which prove fatal, the condition of the substance of the lungs and of the bronchial tubes is precisely such as the physical signs observed during life would lead us to expect. The pulmonary cells, over a

large portion of the lung, are completely and equably inflated, so that when the sternum is raised, the lungs not unfrequently protrude from the cavity of the chest. Some portions, however, particularly the posterior and inferior parts and the edges of the lungs, are usually found in a state of consolidation, depressed below the level of the adjacent inflated portions, and of a deep purple colour. The consolidation will be found to be lobular, being bounded by abrupt and angular margins formed by the interlobular cellular septa, and may involve either a few isolated lobules, or a larger or smaller portion of one or both lungs. The bronchial tubes will contain much secretion, and their lining membrane will be reddened, roughened, and thicker and softer than natural; the amount of secretion in the tubes, and the intensity of the change in the mucous membranes, increasing as we advance towards the ultimate ramifications of the bronchi. Some of the smaller tubes, and especially those contained in the portions of consolidated lung, are entirely filled with secretion, so that when a section is made through one of these spots, small drops of viscid white matter are seen to exude from the cut extremities of the bronchi. The matter contained in the tubes of larger size more nearly resembles ordinary muco-purulent fluid, but in those of smaller size, it is whitish-coloured and very viscid, and occasionally almost membranous; and in those contained in the consolidated lobules it is more or less distinctly purulent. The consolidated parts vary considerably in appearance and firmness; some are of an uniform purple colour, and are solid, and give a peculiar knotty feeling when the lung is handled; others are of a yellowish colour, and are soft, so as readily to break down under pressure; and in yet others the tissue is entirely diffuent, or small cavities are formed, either by the dilatation or ulceration of the smaller bronchial tubes, or by the suppuration or breaking down of the consolidated pulmonary tissue in which they are imbedded.

When his attention was more particularly attracted to the morbid anatomy of the acute capillary bronchitis, during the epidemic of influenza, Dr. Peacock adopted, as the explanation of the two opposite conditions of the lung which were found after death, the views then generally received. The inflation he referred to the air being drawn into the cells with the inspiratory act, and retained there in consequence of the act of expiration being too feeble to force it out through the obstructed bronchial tubes; and the consolidation he regarded as the result of inflammatory exudation into the substance of the lung, and applied to it the common term of "lobular pneumonia."

These views, however, the author is now disposed to regard as erroneous. The inflation of the lung cannot, he thinks, depend on the cause assigned, because, so far from the act of inspiration being the most powerful of the two, it is really the feeblener, and also because the inflation is developed, not in those parts of the lung in which the obstruction is most considerable, but, on the contrary, in the portions least affected. The consolidation also, he observes, cannot depend on exudation into the cells, because the condensed parts can, in some cases, be entirely inflated after death.

The profession have for some time been familiar with the collapsed condition of the lung which is found in new-born children, and to which the term "atelectasis pulmonum" has been applied, and more recently the same change has been described in a very able paper by Dr. Gairdner, of Edinburgh, as a not infrequent result of bronchitis. That the lobular condensation of the lungs in these cases is dependent on collapse of the cells, may be frequently demonstrated by the ready inflatability of the condensed parts; while, in other cases, the extension of the inflammation from the bronchial tubes to the collapsed tissue around, and the various changes which result, afford a sufficient explanation why the test of inflation should no longer be applicable.

Adopting, therefore, the views of Dr. Gairdner, the two conditions must, the author believes, be ascribed to the different degrees of obstruction in different parts of the lungs. In those parts where the swelling of the bronchial mucous membrane and the secretion in the tubes exist to the greatest extent, the air may be wholly prevented from entering into the pulmonary cells during the act of inspiration; while from the peculiar arrangement of the bronchial apparatus, and the greater power of the expiratory act, that which has already entered may be pressed out, and thus the cells will become entirely empty and collapsed. In those portions of the lungs, on the contrary, where the bronchial obstruction is less, the air will enter with more force, and will thus give rise to the extensive and equable inflation of the cells which is observed; and if any portion of the pulmonary tissue give way from over-distension, true emphysema, either vesicular or inter-lobular, may also be produced.

Diagnosis.—From the history which has been given of the symptoms during life, and the morbid changes which are detected in the lungs after death, we shall be aware that this form of inflammation of the lung is liable to be confounded with inflammation of the larger bronchi on the one hand, and of the cells on the other. In the early stages of the disease, before the physical signs have been developed—when, indeed, the dyspnœa which exists probably mainly depends on spasm of the bronchial tubes, a precise diagnosis can hardly be effected, and we can only conjecture the probable form of inflammation which is commencing. When, however, effusion has already taken place into the tubes, we shall be able to detect various signs by which the disease may be discriminated from those affections which most closely resemble it. Capillary bronchitis may be distinguished from general or ordinary bronchitis,—

1st. By the degree of dyspnœa and lividity of the face being greater, and the prostration of strength not only appearing earlier, but being throughout more marked.

2d. By the different forms of crepitant and sibilant rhonchi being at all times the prevailing physical signs.

3d. By the cough being less severe, and the sputum being rather in the form of viscid masses composed of smaller pellets than the diffluent muco-purulent expectoration of ordinary bronchitis.

From pneumonia, capillary bronchitis may be distinguished,—

1st. By the general symptoms; the less sthenic character of the febrile disturbance, the greater degree of lividity of the face and

extremities, the more rapid prostration of strength, and the earlier appearance of the symptoms of asphyxia.

2d. By the physical signs; the absence of material dullness on percussion in the earlier stages, and the occurrence of abnormal resonance, either over the whole or greater part of the chest, at the later periods. The crepitation also is of a coarser character than that which characterises pneumonia, and is first perceived in the inferior parts of one or both dorsal regions, and thence rapidly spreads over the whole chest, and this sign tends rather to pass into the sub-crepitant and mucous rhonchus than to give place to evidences of consolidation.

3d. By the peculiar character of the dyspnœa, cough, and expectoration. The respiratory movements are rapid, short, and hurried, rather than laborious and irregular, and there is sense of constriction in the chest, generally without pain. The cough usually comes on in paroxysms, and is fatiguing from its frequency rather than painful or very severe. The sputum consists of small whitish-coloured viscid masses, free from air, and wants the small air-bubbles, the russet colour, and adhesive quality of the expectoration of pneumonia. These signs, though sufficient to distinguish from pneumonia those cases of capillary bronchitis in which the pulmonary tissue is inflated, will not be entirely applicable when considerable portions of the lung are collapsed. In such cases there will exist, in addition to the usual signs of bronchitis of the smaller tubes, the signs of the existing consolidation, such as bronchial respiration, voice, and cough; but—

4th. The history of the case, the ascertained existence of extensive bronchitis before the evidences of consolidation were present, probably also the sudden occurrence of the consolidation, and the persistent bronchitic character of the sputum, which, in cases of true pneumonic complication would consist of a mixture of the sputum of pneumonia and bronchitis, will probably enable us correctly to conjecture the nature of the change which has taken place in the lungs.

Treatment.—After this brief outline of the symptoms, morbid appearances, and diagnosis of the acute capillary bronchitis, Dr. Peacock refers to the method of treatment which experience has shown to be most applicable for its relief. He remarks that the great tendency of inflammation in any portion of the bronchial mucous membrane to become diffused over the whole of the lungs, and the general obstruction to the circulation which results, render it most important that a correct view should be early taken of the nature of the affection, and an appropriate system of treatment be speedily adopted; for if the first signs of pulmonary disorder be misconceived or neglected, and the disease be allowed to proceed to extensive effusion in the smaller bronchial tubes, the success of any course of treatment becomes doubtful. In sporadic cases of acute capillary bronchitis occurring in persons of robust habit, general bleeding may sometimes be cautiously employed, but generally local depletion is all that is necessary or admissible, especially where, as is most frequently the case, the disease occurs in an epidemic form. Of the modes of local depletion, cupping is preferable to the application of leeches,

being less fatiguing to the patient, while, if the scarificator be applied between the shoulders, direct relief is afforded to the organ affected. When time is of so much importance as in these cases, it is well also at once to commence the exhibition of calomel and opium, and to continue the calomel so as to produce a slight affection of the gums. As, however, in the earlier periods of all forms of inflammation of the lungs, antimony is especially efficacious, it would be well to prescribe that remedy, either in the form of emetics or nauseant doses, so long as the patient's strength will admit. Dr. Peacock has been led to believe that emetics afford most relief in these cases, while, as they occasion less depression, they can also be longer continued. When the inflammatory action has been in some degree subdued by antiphlogistic measures, blisters and other forms of counter-irritation may be advantageously employed.

When the disease has advanced into the third stage without having been actively treated, when crepitation is audible over all parts of the chest, and there is great difficulty of breathing, and prostration of strength, an attempt may be made to get rid of the redundant secretion by the exhibition of stimulating emetics, but the beneficial effect of these remedies is generally only temporary. Expectorants and diffusible stimulants may also be exhibited, though their usefulness much depends, as has been remarked by Dr. Stokes, on the previous course of treatment. When the patient has been neglected in the early stage, or when the depression of strength has precluded from the first the employment of depletion, the stimulating treatment is usually of little advantage; but when reducing measures are early resorted to, the subsequent exhibition of stimulants has generally a most favorable influence on the successful issue of the case. During this stage of the disease, sinapisms, blisters, &c., may be from time to time applied; but, under all circumstances, the convalescence is very protracted, and the patient's strength requires to be supported by nutritious diet, stimulants, and tonics.

ART. 14.—*Remarks on the Nature and Treatment of Hay-Fever.*
By F. W. MACKENZIE, M.D., London.

(*London Journal of Medicine*, July 1851.)

[The author calls attention to the fact, that certain persons are susceptible to morbid impressions upon the mucous membranes, from particular perfumes, or more palpable matters, as the dust of ipecacuanha, and the emanations from hay or fermenting grapes, from the latter of which arises what is termed "Hay-Fever." He points out the rebelliousness of this disease to treatment, and the obscurity which surrounds its pathology. In the treatment he has found arsenic highly serviceable. Speaking of the pathology of hay-fever, the author observes:]

Of the precise pathological nature, or the proximate cause of hay-fever, we are entirely unacquainted; and we are therefore unable to deduce any satisfactory mode of treatment. I have remarked that the more obvious symptoms appear to depend on morbid irritability of

the organic nerves of the respiratory mucous membrane, and that, in this respect, it presents some analogy to a kindred affection of the skin, characterised by extreme irritability of the cutaneous nerves, and one at the same time in which arsenic is extremely efficacious. Upon this ground, I was more particularly first led to employ it; but there are other considerations which recommend it to our notice. In the first place, the *origin* of this complaint is very similar to some in which it has been given with much benefit, such as remittent and intermittent fever, neuralgic affections, and some forms of rheumatism, which, in common with hay-fever, are traceable to malaria, miasmata, or vegetable effluvia of various kinds; whilst in the more specific actions peculiar to these, and in the morbid condition of the nervous system which prevails, we see much that is analogous in all. But independently of these more specific diseases, we have many and undoubted proofs of the utility of arsenic, in correcting or controlling irregular nervous actions, and morbid conditions dependent upon them; and its remedial powers in chorea and epilepsy, in prurigo, lepra, psoriasis, and many other cutaneous diseases, may be cited in illustration. Within certain limits, most writers agree in considering it as a tonic; and as such, its action is especially marked upon the skin and the mucous membranes. An eminent practitioner remarked, that for strengthening and giving tone to the former, he knew of nothing equal to it; and in regard to the latter, it has evidently a specific action upon that of the whole respiratory tract. Hence its administration, when given too largely, or for too long a period, is occasionally followed by redness and irritation of the eyes and eyelids, coryza, dryness of the throat, cough, and symptoms of pulmonary irritation; and, on the other hand, in moderate doses, it has been given beneficially in various irritable and morbid conditions of this membrane, such as is met with in asthma, hooping-cough, catarrh, ophthalmia, &c.

Mr. Wm. Simmonds, of Manchester, gives the following report of its employment in hooping-cough, in a letter to Dr. Duncan, published in the second volume of the *'Annals of Medicine'* for 1797, p. 393. "For upwards of three years, I have given arsenic in the hooping-cough with the most salutary effect. In general, it has put a stop to the disease in about a fortnight; and it has never failed to moderate it in a few days. I have administered it in one unsuccessful case only, and even then it afforded considerable relief; and had I been called in earlier, or had I been permitted to pay the attention the case required, I am of opinion it would have succeeded in that also. I have used it in the form of the mineral solution of Dr. Fowler; and in the dose, and with the precautions recommended by him in his work on Intermittents, &c., children of a year old may take it with safety. Previous to, and during its use, bleeding, blisters, and emetics may be employed, according to the indications, particularly the latter. It should be continued until the disease is subdued; and then leaving it off for a week, it should then be had recourse to for a week, to prevent a return. Should exposure to cold occasion a relapse, it has hitherto put a stop to it, upon being taken for a few days."

In some forms of ordinary catarrh, I have myself given arsenic with

the best results ; but more especially in those cases in which the affection has been of a local character, and there has been an absence of inflammatory action, as well as of febrile disturbance. These circumstances forbid its employment ; and it is because they so frequently occur in connection with catarrhal complaints, that it is for the most part inappropriate. Where, however, there is irritation of the mucous membrane rather than inflammation, as is especially the case in hay-fever, it may be employed with much advantage.

In catarrhal ophthalmia, and more especially in those forms which are of a passive, subacute, or chronic character, or where the irritability of the conjunctiva is excessive, arsenic has a very beneficial effect. I might subjoin cases in illustration of this fact, were it not well known to oculists, and referred to in systematic treatises on diseases of the eye.

Lastly, in intermittent headaches, brow ague, cephalalgia, and other affections in which the mucous membrane of the frontal sinuses appears to be the seat of pain, arsenic has proved efficacious. These facts are all of importance, in connection with the subject of the present communication.

The cases of hay-fever in which I have seen it most serviceable have been of a catarrhal rather than of an asthmatic character ; and I have given it, on an average, in doses of five minims of Fowler's solution three times a-day. Where, however, the attack has been slight, or the medicine has been given with a view of improving the tone of the mucous membrane rather than of correcting morbid action, three-minim doses, or even less, are preferable ; whilst, on the other hand, if the irritation has been excessive or resists these, larger doses may be given, and their action modified or assisted in different cases by remedies of a kindred character.

Arsenic is best given, in this affection, in moderate doses, and I should propose smaller than those recommended by Dr. Fowler, whose experience led him to lay down the following rules for its administration : "Patients from two to four years," he says, "may take from two to four drops of the solution ; from five to seven years, may take from five to seven drops ; from eight to twelve years, may take from seven to ten drops ; from thirteen to eighteen, may take from ten to twelve drops ; and from eighteen and upwards may take twelve drops as a dose." He advises that doses proportional to the age of the patient should be administered three times a-day for five days ; then omitted for two or three days ; and then repeated for three days, to prevent a relapse. These doses are mentioned with especial reference to the cure of intermittent fevers. They are much too large for the cases under consideration ; for which, from one to five minims of the mineral solution may be considered as an average dose, and beyond this it will seldom be necessary to carry it, while positive harm may result. Seeing, indeed, that the state of the mucous membrane is one of morbid susceptibility to impressions, and that the medicine has a specific action upon it, it is important to keep within due limits and so avoid any severe or unfavorable reaction.

When the medicine alone fails to do good, its use may be alternated with quinine, or the two medicines may be given concurrently.

Dr. Fowler found this practice successful, in the treatment of intermittent fevers, when either bark or arsenic, singly administered, failed to remove the disease. He observes: "if the solution and Peruvian bark have been given separately, and have failed, it will sometimes be advisable to try the joint power of the medicines at the same time, but in doses rather smaller than usual. In these cases, the solution should be given at stated hours three times a-day, and the Peruvian bark may either be given combined with it, at the same periods or between the fits, in as frequent doses as the stomach can bear." Another useful addition to arsenic, when the irritation of the mucous membrane is severe, or the stomach is unpleasantly affected by it, is opium, in small doses; indeed, its general employment in conjunction with arsenic has been recommended by many practitioners, as being calculated to render its action not only more certain, but less disagreeable to the stomach; and in cases like the present, where the irritability of the part more immediately affected is excessive, its use is otherwise appropriate. It is best given in small doses, not exceeding two or three minims of the tincture or of Battley's solution; and should it derange the stomach, or interfere with the secretory functions of the liver or other organs, some other sedative may be substituted. I have seen very favorable effects from the Indian hemp in cases of morbid irritability of the nervous system, and these would lead me to recommend a trial of it in the present disease. The most efficacious preparation is the ætherial tincture.

Lastly, when the irritation is most marked in the pulmonary portion of the mucous membrane, and the symptoms are of an asthmatic rather than catarrhal character, ipecacuanha, antimony, squills, or some other expectorant, may be given concurrently with it, if circumstances indicate the employment of such remedies.

But in addition to the more specific treatment of the disease, much may be done in the way of prevention, by invigorating the nervous system, and improving the tone of the respiratory mucous membrane; and measures that fulfil these objects should be perseveringly employed by persons who are subject to these attacks. In particular, the daily use of the shower bath, the application of cold locally to the chest, neck, and shoulders, and the use of cold collyria and gargles, may accomplish much good. The diet and regimen also should be subservient to these ends; and, if there exist an undue irritability of the nervous system, depending on a defective condition of the blood, steel in some appropriate form should be also given.

I would further observe, that when the disease is fully developed, and the irritability of the mucous membrane is very great and distressing to the patient, it may be very much mitigated by the occasional application of the vapour of warm water. By holding the face over a large basin of boiling water, and retaining the steam by means of a flannel thrown over the head and shoulders, it is readily and directly brought in contact with the whole respiratory branch, and affords a very striking relief to the irritation which exists. Of medicated vapours I have no experience; nor have I seen any benefit derived from the topical application of lotions of the nitrate of silver, &c. Indeed, seeing that the disease is seated rather in the nervous system

than the mucous membrane, I should anticipate less benefit generally from local than from constitutional treatment.

These, then, are the principal points to which I would direct attention, in the treatment of hay-fever:—1, to preventive measures, comprehending, more particularly, tonic treatment in every available form, both local and constitutional; 2, to specific treatment, comprising more especially the administration of arsenic, and modified or assisted in the manner proposed, according to the requirements of individual cases; 3, and lastly, to soothing or palliative treatment, which is not inconsistent with the former, but may be advantageously combined with it.

ART. 15.—*On Putrefactive Disease of the Lungs as a sequel of Pulmonary Apoplexy.* By H. FEARNSIDE, M.B. Lond.

(*Medical Gazette*, July 15, 1851.)

[The form of disease which the author here illustrates has been described by Dr. Law, and consists in the putrefaction of blood effused in pulmonary apoplexy. The patient was an unhealthy man, aged 44, employed in a cotton factory, dissipated, and of a phthisical family. For twelve months he had been subject to cough, and on examination there were signs of consolidation under both clavicles. He was therefore pronounced to be tuberculous, and treated accordingly.

After exertion he began to spit blood, and on several occasions expectorated several ounces at a time. On examining the chest, now, it was observed that one side expanded more freely than the other. There was dullness under the right clavicle, but more so under the left, where the respiratory murmur was inaudible, and replaced by a coarse crepitation.

Under a sedative treatment the spitting of blood gradually subsided, but the cough and auscultatory signs remained unaltered. Soon the breath and expectoration were observed to have the fetid odour of gangrene; the latter being greenish in colour. Simultaneously the general symptoms became aggravated; the pulse became more frequent and feeble, his appetite failed, and he was continually bathed in perspiration. Under the use of generous diet, with nitro-muriatic acid, and diffusion of chlorine gas through the apartment, the patient gradually recovered, without, at any time, offering the signs of a cavity.

Upon this case the author makes the following judicious remarks:—]

As is stated in the history of the case, when the patient was first seen he was supposed to be suffering from incipient phthisis. This conclusion was rendered inevitable by a consideration both of the prodromata and the existing signs and symptoms. His course of life had been one calculated to lower the vital standard, and to produce degraded nutrition. Excesses of various kinds, and impoverished diet, had contributed to this result. His disease was evidently a chronic one; the physical signs gave evidence of the existence of some consolidation in the apices of both lungs, and this, interpreted by the light afforded by his history, could only be tubercular.

The nature of the disease which existed when he next presented

himself to notice seemed to be almost equally clear. Very soon after the operation of a cause than which nothing can be conceived more likely to induce great pulmonary congestion, he was seized with profuse hæmoptysis, which recurred from time to time. On examining into the state of the lungs it was found that there was a much greater amount of solidity in the upper part of the left lung than when he was previously seen, as well as considerable effusion into the smaller air-tubes. The only causes to which this could be ascribed were—(a), extension of the tubercular disease; (b), condensation of the structure of the lung as a result of inflammation; (c), or pulmonary apoplexy.

(a). The great increase in the amount of solidification since the time when the patient was last seen, and the fact that up to a late period his health had been improving, coincided with the evidence supplied by the history as to the existence of *recent* disease, and precluded the idea of its being owing to increased tubercular deposit in the lung.

(b). Although pneumonia is by no means so uncommon in the upper lobes of the lungs as many practitioners appear to suppose—a fact which divests the circumstance of *position* of much of its importance as an element in the diagnosis of cases, such as the one under review—there were more conclusive reasons for denying the existence of inflammation of the lung. Such were afforded by the general history, the occurrence of the hæmoptysis, the character of the pulse (small, feeble, and jerking), and the character of the expectoration.

(c). That the condensation was due to the effusion of blood into the substance of the lung; in other words, pulmonary apoplexy, was rendered probable by the presence of hæmoptysis returning in fits—one of the most constant and least equivocal signs of this affection, when associated with other phenomena, also witnessed in this case. These were the dullness on percussion, absence of respiration over the summit of the lung, and the coarse crepitation over the neighbouring parts.

This being granted, the chief interest of the case attaches to the subsequent occurrence of putrefaction of the lung—a fact of which the intolerable odour of the breath and expectoration, occurring under the circumstances above described, will be deemed, I apprehend, sufficient evidence; for, although fetid matter may be expectorated in other diseases than pulmonary gangrene, it will be admitted, I think, that its exhalation from a solidified lung, without the presence of any of the signs of a cavity, can be ascribed only to the disease in question.

The termination of pulmonary apoplexy in gangrene is undoubtedly rare; it has, however, been previously witnessed. Dr. Townsend remarks upon this subject, 'Cyclopædia of Practical Medicine,' vol. i, p. 141: "Pulmonary apoplexy has been observed to occur as a precursory symptom of gangrene, and may, we conceive, in some cases contribute to produce it. In one instance, particularly, we were enabled to follow the different stages of the disease from the formation of an extensive hæmoptoic engorgement to its conversion into a large gangrenous abscess. The rationale of this transition may, we conceive, be explained thus; in the hæmoptoic engorgement the circulation through the indurated mass is completely obstructed by the

solidification of the part, and by the vessels leading to it being plugged up with coagula of fibrine. This plugging up of the vessels has been noticed by Laennec, and more particularly by Bouillaud, and we have repeatedly ascertained the fact on dissection. Now if we compare the condition of the part thus circumstanced with the pathology of gangrene, as laid down by the most recent and approved authorities on the subject, we shall find it placed under precisely the most favorable circumstances for passing into gangrene—or, as the disease has been more appropriately designated by Dr. Law, putrefactive disorganisation of the lung.”

Another writer (Dr. Stokes, in ‘Dublin Quarterly Journal of Medical Science,’ February 1850), to whom we are largely indebted for our increased acquaintance with thoracic pathology, makes the following observations upon this question:—“The putrefaction of blood previously effused into the substance of the lung, as in cases of pulmonary apoplexy, has been considered by Dr. Law as constituting an important variety of pulmonary gangrene. I have not seen any cases of the change from one of these diseases into the other; and I apprehend that the occurrence must be rare. I would say, further, that, where a clot of blood effused into the lung putrefies, this change is in itself a proof of a gangrenous disposition pre-existing; and I feel satisfied that the hæmorrhages in cases of gangrene have no relation to pulmonary apoplexy. That an effusion of blood into the lung does not more often end in putrefaction of the fluid is certainly an extraordinary fact; but not more so than the rarity of putrefaction in abscesses, tubercular cavities, or empyema and pneumo-thorax. That it is rare appears from the fact that neither Laennec, nor many other writers on pulmonary apoplexy, mention gangrene as a result of the disease; which, besides, is, in many instances, connected with disease of the heart, producing either an active or passive congestion of the lung.”

From the decisive character of the symptoms presented in this case, it might have been expected that the signs of the existence of a cavity would have been unequivocal, but such was not the fact: so long as the patient remained under my observation, I was unable to satisfy myself of the presence of an excavation. It is stated by Dr. Wood, of Philadelphia, in his work upon the ‘Practice of Medicine,’ that after the expectoration of fetid matter we must conclude that a cavity has formed, and that we can detect it by the usual means. Dr. Stokes dissents from both these opinions. He states that he has known the expectoration of putrid matter to occur within thirty-six or forty-eight hours after the operation of the exciting cause, and that it is difficult to conceive the formation of a cavity so rapidly; and that, on the other hand, months may elapse with the best-marked symptoms, and yet no signs of a cavity be discoverable.

ART. 16.—*Rules for Bleeding in Pneumonia.*

[The following judicious remarks by Dr. Bennett, are perfectly in accordance with our own experience:]

If we are called to a case at a very early period before exudation

is poured out, and before dullness as its physical sign is characterised, but when notwithstanding there have been rigors, embarrassment of respiration, more or less pain in the side, and commencing crepitation, then bleeding will often cut the disease short. This state of matters is rarely seen in public hospitals. When on the other hand, there is perfect dullness over the lung, increased vocal resonance, and rusty sputum, then exudation blocks up the air-cells, and can only be got rid of by that exudation being transformed into pus, and excreted by the natural passages. In such a case, bleeding checks the vital powers necessary for these transformations, and as a general rule, if the disease be not fatal, will delay the recovery. I believe this to be the cause of so much mortality from pneumonia in hospitals where bleeding is largely practised, for in general, individuals affected do not enter until the third or fourth day, when the lung is already hepatized.

Edinburgh Monthly Journal, Aug. 1851.

ART. 17.—*Treatment of Aphonia by Stimulating Inhalations.*
By DR. PANCOAST.

(*Transactions of the American Medical Association, vol. iii, 1851.*)

The form of aphonia, here alluded to, is that following an ordinary cold without leaving any perceptible organic lesion in the pulmonary apparatus. The voice is reduced to a faint hoarse whisper, distinguishable only at the distance of a few feet; and a continued attempt to talk, though it gives no pain, becomes quickly attended with a feeling of fatigue, as though there were some obstruction to the passage of air through the larynx. In breathing merely, there is little or no difficulty; as the individuals are capable of undergoing considerable exertion without any unusual signs of fatigue. Having had an opportunity several years ago of observing the movements of the vocal chords in a person who had attempted suicide, and was left with a cicatrised wound opening into the ventricles of the larynx, Dr. Pancoast watched with great interest the play of these vocal chords, which were fully exposed to view, and was astonished at their frequent varied, and extensive movements. From the evidence he obtained with regard to their motion, he was led to infer that this form of aphonia arose from a partial paralysis of the intrinsic muscles of the larynx, to be cured by stimulating them to action. His first case occurred eight years ago. The patient was a healthy young country girl; the aphonia had lasted for six months, resisting all treatment. She was made to inhale chlorine, gradually liberated from chloride of soda or lime, by very dilute hydrochloric acid in a common glass retort. The inhalation was continued for some minutes, and repeated two or three times a day according to the degree of irritation produced in the throat and larynx. From the first trial the patient's voice improved, and in three days had become nearly as strong as ever. Two months after her return to the country, another cold was followed by an attack of aphonia, which also yielded to a few inhalations of chlorine vapour. Dr. Pancoast has since treated a case in a medical

practitioner, who had tried, among other remedies, repeated applications of strong solution of lunar caustic, without any good effects. The voice was restored to its natural strength in a week or ten days. He suggests that care should be taken that the chlorine be not developed too rapidly. He believes that it acts merely as a local stimulant, and that iodine, or any other exciting vapour, would produce similar results.

ART. 18.—*Symptoms of the Growth of Mediastinal Tumours.*
By Dr. BURROWS.

(*Medical Times*, June 7, 1851.)

In a clinical lecture on the diseases of the anterior mediastinum, Dr. Burrows points out the symptoms which indicate the presence of a tumour. He says that the earliest symptoms are those of irritation of the respiratory tube; then follow symptoms resulting from pressure on neighbouring parts. There are also the physical signs of some solid in the substernal region.

At first the patient has frequent attacks of urgent dyspnœa, such as is produced by pressure on the trachea and bronchi. These attacks are spasmodic, and the patient is supposed to be the subject of asthma. This distress may subside with or without expectoration. Auscultation at this period offers no diagnostic information. The frequent repetition of these attacks is soon followed by another train of symptoms which are the result of pressure on the vessels adjacent. The cutaneous veins about the upper sternum and one clavicle become more conspicuous than natural. This is more frequently noticed about the right side than on the left. The external jugular, the thyroideal, the mammary, and thoracic veins successively enlarge, remain constantly turgid, and become tortuous. If the course of the current, in some of the enlarged superficial veins on the thorax, be ascertained by means of pressure at different points, it will probably be discovered that the blood is moving in some of them in a retrograde direction to that which is natural. After awhile the superficial veins of one upper extremity become enlarged and conspicuous. This venous congestion is soon followed by œdema of the affected parts; some swelling is now observed on one side of the throat, about the upper portion of one side of the chest of the upper extremity of the same side; and, lastly, if the patient be an adult female, by a gradual enlargement of the corresponding breast. This progressive œdema will at last extend to the face, particularly to the eyelids, which become puffy, while the expression of the eyes is peculiar. They have a glassy watery look, with rather dilated pupils, which state of the eyes is not unfrequently observed in cases where there is an obstruction to the passage of blood through the right cavities of the heart, and which condition of the iris may at will be temporarily induced by holding the breath for a long time and thus preventing the flow of venous blood into the thorax. And now, thirdly, we shall, by careful and repeated auscultation and percussion, detect physical signs which denote the presence of some solid beneath the sternum, which transmits the heart's sounds far

beyond their proper limits, and which seriously impairs and modifies the healthy respiratory murmur in the upper lobe, and subsequently, perhaps more extensively, of one lung. The heart's sounds will be heard distinctly to the summit of the sternum, and to a varying extent beneath the right clavicle, but without the peculiar blowing sound which is generally heard over a large aneurismal sac. There is no pulsation in the intercostal spaces, nor over the sternum. The trachea is sometimes displaced, the vesicular sound is lost, and is replaced by bronchial breathing. As the case advances, these auscultatory signs become confirmed and extended. There is greater impairment of respiratory murmur. Percussion gives a dull sound all over the sternum, over the greater part of the affected side, while resonance is obtained by percussion in the axilla of the affected side.

SECT. III.—DISEASES OF THE CIRCULATORY SYSTEM.

ART. 19.—*On Angina Pectoris.* By JAMES KIRK, Esq.

(*Medical Gazette*, Aug. 29, 1851.)

Definition.—Neuralgia of the branches of the par vagum, going to the heart and lungs; embarrassing the functions of these organs, and spreading by nervous connection to other parts, sometimes accompanied by organic lesion of the heart or great vessels, sometimes not.

Causes.—Predisposing; the middle age, the male sex, an indolent, luxurious, studious, or sedentary life; gout, rheumatism, or neuralgia; or worse than these, the long-continued anxiety of mind and fatigue of body, to which persons of high mind and narrow circumstances are, in the present state of society, so constantly exposed.

Causes.—Exciting, running, walking, especially up hill, or up stairs, great bodily exertion or mental excitement, and rapid changes of temperature; thus we most frequently see a severe attack after great exertion, a fit of passion, or on the evening of a cold wet day. As the disease increases in severity it will be found that slighter causes are sufficient to produce an attack; and that any one of them will occasion a seizure much more certainly after a meal. Finally, when the disease has become chronic, it may even attack the patient in his sleep.

Symptoms.—In the acute form of the disease the patient is suddenly seized with a sharp, darting, lancinating, or stabbing pain under the left breast, frequently spreading to the throat, arm, back, and leg of the same side; this pain frequently amounts to the most excruciating agony, and has been compared by Laennec to the piercing with nails or the laceration by the claws of animals; and is accompanied by a sense of suffocation, great difficulty of breathing, tendency to syncope, and flatulent distension of the stomach followed by eructations; together with the fear and the feeling of immediate death.

The pulse varies in different individuals; sometimes it is regular, sometimes irregular, sometimes weak, sometimes strong; but generally

feeble and slow. After lasting for a longer or shorter time proportioned to the severity and duration of the disease, the attack generally passes off spontaneously, or yields to the remedies employed.

A feeling of weakness and numbness sometimes remains for a little in the parts previously affected with pain; but with this exception the patient may enjoy tolerable health, and show no sign of disease until again exposed to some of the exciting causes.

In the chronic form of the disease the attacks are often preceded by yawning and weariness; they are now more readily excited; the interval between them also is shortened, and the relief obtained afterwards more imperfect; the pain commonly lasting longer, but being less violent. In addition likewise to the anginous paroxysm the patient generally suffers from some other allied disorder of the nervous, digestive, or circulatory system, which may have been either a cause or a consequence of his malady; tic, dyspepsia, constipation, diarrhœa, (leucorrhœa, if the patient is a female,) œdema, dropsy, or organic disease of the heart, may also be present to increase his suffering and diminish his hopes of recovery.

Diagnosis.—The only disease which bears any resemblance to angina is asthma; but the sharp pain in the breast and arm, and the sense of suffocation characteristic of angina, can hardly be mistaken for the dyspnœa, cough, and expectoration of asthma.

Prognosis.—Angina is a disease not necessarily fatal when occurring in young subjects with no organic disease of the heart; but when it occurs in elderly people with organic disease of the heart or great vessels it is always mortal. In such cases, indeed, the organic lesion may be quite sufficient to account for the death of the patient, independent of the angina.

Pathology.—In the great majority of cases in which an inspection has been obtained after death, the heart or large vessels have been found diseased; but their pathological condition has been by no means constant or uniform. In some cases organic disease of the heart, the aorta, or the coronary arteries, have been found; in others, ossification of the coronary arteries, ossification of the valves, ossification or dilatation of the aorta, or preternatural softness of the heart, have been discovered after death. Indeed, in the words of Dr. Unwins, "there is scarcely any malformation of the heart or its blood-vessels that has not been occasionally found after death, from what would be considered angina pectoris; while, on the other hand, individuals have fallen victims to the affection, fully marked, and the most accurate post-mortem examination has not been able to detect the slightest indication of structural derangement." In other cases, again, according to Dr. Copland, the only morbid appearances have been found in distant organs; the heart and large vessels remaining sound. These appearances were "adhesions of the pleura; effusion into the pleura; thickening of the bronchial mucous membrane; dilatation of the bronchi; œdema of the lungs; abscess in the mediastinum; ossification of the cartilages of the ribs; enlargement of the liver, and scirrhus of the pylorus."

But, on consideration, it will be obvious that we must look to some other cause than the organic lesions just mentioned for an explanation

of the terrible agony endured in this disease; seeing that singly and by themselves they do not account for it.

For, in the first place, these lesions are of very frequent occurrence, while angina is a rare disease; 2dly, these lesions are for the most part permanent conditions of the parts in which they occur, while this disease is intermittent; 3dly, these lesions may be present and the disease absent, or conversely, the disease may be present and the lesions all wanting; while in none of them does the patient endure the same amount of suffering as in angina; 4thly, we have seen a case in which tic preceded angina, or, in other words, the patient had neuralgia of the branches of the fifth pair going to the face, before those of the eighth (going to the heart) were affected by the same disease. These, and other reasons that might be mentioned, serve to show that something more than an organic lesion is required to constitute the disease under consideration, and to confirm the opinion of Jurine, Desportes, Laennec, Chapman, and Copland, that it is a species of neuralgia of the pulmonary and cardiac nerves, affecting the functions of the heart and respiratory organs, and extending by nervous connection to other parts; the organic lesions found in fatal cases being either coincidences or effects of the disease.

Treatment in the attack.—If the pulse is full and strong, and the patient stout and plethoric, bleeding from the arm should be practised; but if the patient is weak and debilitated, and the pulse feeble and slow, it should be altogether avoided. And instead of bleeding, a flannel wrung out of hot water and sprinkled with turpentine should be placed over the region of the heart; the feet put in hot water containing mustard, and sixty drops of laudanum given immediately in a glass of any strong spirit; if relief is not speedily obtained, this dose may be repeated with perfect safety; and sometimes acts like a charm in relieving the pain. This should be followed by the exhibition of some antispasmodic and carminative, such as ether, aromatic spirit of ammonia, or ammoniated tincture of valerian in cinnamon or mint water, in order to assist the stomach to expel the gas which distends it; these should also be given after bleeding in those cases in which it is practised, for when greatly distended, as it commonly is in this disease, the stomach pushes up the left side of the diaphragm: this diminishes the capacity of the chest, and so impedes the movements of the heart. It is not to be supposed, however, that the distension of the stomach is the cause of the pain in the breast; for the pain at the heart is felt before the distension of the stomach is complained of.

Treatment in the interval.—In the first place it will be absolutely necessary to discover, by the most careful examination, what are the predisposing and exciting causes of the disease, in order to avoid them if possible, as well as to determine the actual condition of the heart and lungs by means of the stethoscope.

For example, attention should be paid to the patient's habits and manner of living; the state of the stomach, bowels, liver, (and uterus if a female;) the condition of plethora or anæmia, and the predisposition to gout, rheumatism, or neuralgia; in short, every appreciable disorder of the system is to be met by the appropriate remedies, and corrected as far as possible. If the stethoscope should enable us to

discover any abnormal condition of the heart, the treatment must have a special reference to that condition; of course, where there is serious organic disease of the heart, a cure is not to be looked for; here the utmost we can do is to palliate the urgent symptoms. The remedies which have been found most useful are leeching, or cupping and counter-irritation over the region of the heart, by means of croton-oil liniment, tartar emetic ointment, repeated blisters or issues, with low diet in the cases of stout plethoric individuals. With weakly debilitated subjects an opposite plan of treatment ought to be followed; tonics, such as bark and steel, should be exhibited with nourishment and cordials. Various other medicines have been recommended in angina; the preparations of iron, sulphate of zinc, nitrate of silver, arsenical solution, sulphate of quinine, mercurials, and colchicum, may all be prescribed with advantage according to the various indications afforded by the history of each individual case.

In addition to the above, we may mention that Laennec recommended magnetism, and Kneeland electricity; and that Heberden gave an opiate at bedtime when the attacks occurred during the night. Moreover, cases of every variety of complication will be much benefited by pure air and gentle exercise, together with an entire change of all the habits and circumstances prejudicial to the patient's well-being, in which the disease had its origin.

ART. 20.—*Diagnostic rules with reference to Cyanosis.*

By Dr. NORMAN CHEVERS, Chittagong, Bengal.

(*Medical Gazette*, Sept. 19.)

Dr. Chevers observes that it is probably impossible to diagnose the particular set of lesions which are present in the vascular system of an infant a few days old. Its heart may be the seat of any conceivable kind of malformation; still, if the child has become cyanosed almost immediately upon the establishment of respiration, it is most probable that it suffers from closure of the pulmonary orifice, with imperfection of the ventricular septum.

Where the symptoms of morbus cæruleus are not developed until some days or weeks subsequently to birth, it is probable that the orifice of the pulmonary artery is narrow, the ventricular septum open, and the foramen ovale and arterial duct either closed or distinctly contracted; or the latter of these passages may have become narrowed or closed, while the former is widely pervious.

If the infant be upwards of a year old, it is in the least degree improbable that it suffers from the malformation usually known as "distribution of the descending aorta from the pulmonary artery."

If the child has survived its fourth year, transposition of the great arteries is scarcely to be suspected.

When cyanosis is present at about the age of three or four years, it is probably due, either to great contraction, or closure of the pulmonary orifice, with ventricular communication. Should a single systolic bruit be heard superficially in the region of the pulmonary orifice, the case will almost certainly prove to be one of the former kind.

At the age of one month, or at any subsequent period, it cannot be judged with any probability that the heart literally consists of only two cavities.

In early infancy there are no means of diagnosing between imperforation of the pulmonary artery and transposition of the two main arteries, except that the former irregularity is of far more frequent occurrence than the latter.

If the patient be above the age of seventeen years, imperforation of the pulmonary orifice can scarcely be suspected.

A person above the age of sixteen years, or a young adult, suffering from cyanosis of long standing, a bruit being audible in the region of the pulmonary artery, most probably has contraction of the orifice of that vessel, with perforation of the septum ventriculare.

If the individual has passed the period of early youth before becoming the subject of cyanosis; or if that symptom, formerly scarcely perceptible, has become considerably more apparent of late, it is, at first sight, probable that the disease is congenital narrowing of the pulmonary artery, the impediment having latterly been increased by thickening and further contraction of the parts, consequent upon superadded disease. In this case the ventricles probably do not communicate.

If the patient has passed the age of thirty years, the existence of congenital deficiency of the ventricular septum is highly improbable. Those who suffer from a congenital cause of obstruction which has originally been sufficient to arrest the development of the septum, very rarely, if ever, attain so advanced an age.

If, in any given case of cyanosis, the symptoms be ascribed solely to a patent condition of the foramen ovale, the incorrectness of that diagnosis will certainly admit of proof upon examination of the body.

[The larger number of the above diagnostic rules will, doubtless, occasionally fail; but Dr. Chevers believes that they afford as near an approximation to the truth as we are at present capable of obtaining when attempting to generalise upon a disease so multiform in its types, and, at the same time, subject to so few variations in its rational symptoms, as congenital malformation of the heart.]

ART. 21.—*On some of the Complications of Cardiac Disease.* By. EDWARD LATHAM ORMEROD, M.D., Physician to the Brighton Dispensary.

(*Medical Gazette*, April 25.)

[The following is a continuation of the Gulstonian lectures, portions of which we extracted in our last volume. The complications here mentioned are the cerebral, pulmonary, and abdominal.]

1. *Cerebral complications.*—To the description of the cerebral complications of disease of the heart which Dr. Burrows has given us, there is little to add. Dr. Ormerod would only, as having drawn his experience from the same field—namely, the wards of St. Bartholomew's Hospital,—express his confirmation of the correctness of that writer's remarks.

Of the frequency of the connection between apoplexy and valvular disease of the heart there can be no doubt: it has been made matter of arithmetical demonstration. But it is surprising how what is now so clear should have so long remained unknown, or have been even denied; and the probable reason of this circumstance, as involving a great point of pathology, is worth investigation.

Lallemand says that in no cases of apoplexy which he has read or observed has he ever found contraction of the aortic orifice, which yet he considers to be the most common cause of hypertrophy of the heart. For that, under these circumstances, the increased force of the heart is lost in overcoming the resistance occasioned by the contraction, and does not affect the brain. Hence he infers that it is only in cases where the obstruction causing the hypertrophy does not lie between the left ventricle and the carotids that sanguineous apoplexy can ensue; and he adds that it is not usually in the apoplectic cases of heart disease that we observe the livid lips and cheeks, or the œdema, which point to obstruction of the circulation in the veins.

As far as the above statement goes, Dr. Ormerod believes it is literally correct. Real sanguineous apoplexy is very rare under the circumstances; but the symptoms of apoplexy—sudden coma and hemiplegia, for instance—are not quite so rare in connection with advanced valvular disease of the heart as might be supposed from a less literal interpretation of Lallemand's statement. What, then, is the nature of the changes on which the symptoms depend?

There appears, from all that Dr. Ormerod has been able to observe or to read of the observations of others, no reason to question the accuracy of the conclusion which Dr. Burrows has expressed, that "hypertrophy of the left ventricle must be admitted as a powerful predisposing, or even exciting, cause to apoplexy and sudden hemiplegia."

But where the hypertrophy is not more than sufficient, from whatever cause, to make good the valvular imperfection, we should be wrong in expecting *commonly* to find the results of increased arterial pressure. And sanguineous apoplexy, as already observed, is rare under such circumstances: from whence we may also infer that venous congestion is not one of its common causes.

The evidence of the other writers, as far as Dr. Ormerod has been able to consult them or the conclusions for them, is negative on this point: but at least it may be inferred from their silence that they did not connect sanguineous apoplexy with advanced and obvious diseases of the heart. An analysis, however, of the cases detailed by Andral and Bouillaud, the most available, for the present purpose, of those invaluable masses of detailed observations in which the French medical literature is so much richer than our own, give a very striking result, which goes far to explain the cause of the discrepancy between former and more recent observation as to the connection between the symptoms of apoplexy and those of valvular disease of the heart.

From these two writers twenty-eight observations may be collected of cerebral disease of limited extent accompanying disease of the heart. Fourteen of these cases had softening of, and fourteen had sanguineous effusion into, the substance of the brain. This different nature of the changes may be observed to present a close correspondence with the

varing amount of the symptoms of the valvular lesion. Of the exact nature of the valvular lesion itself, however, the details do not always allow us to speak. The cases may be thus arranged:—

Sanguineous Apoplexy.

Andral 11 cases, age 57·5 . .	{ 10 had no general symptoms of valvular disease, the heart being more or less hypertrophied.
	{ 1 had anasarca.
Bouillaud 3 cases, age 54·6 . .	{ 1 no general symptoms, &c.
	{ 1 anasarca.
	{ 1 pulmonary complication.

Cerebral Softening.

Andral 8 cases, age 59·2 . .	{ 4 no general symptoms.
	{ 4 anasarca, dyspnœa, &c.
Bouillaud 6 cases, age 32·3 . .	{ All had more or less general symptoms of valvular disease.

The general symptoms of valvular disease were therefore,—

	Apoplexy.	Softening.
Present in	3	10
Absent	11	4
	—	—
	14	14

Dr. Ormerod fears to weaken the force of the conclusions of this table by any comments, or by any verbal expression of what the figures so clearly convey. His experience on this subject, though very limited, is quite in accordance with the above. Of four cases of dissection after death from sanguineous apoplexy, with disease of the valves of the heart, the valvular affection was small in degree and simple in kind, and the heart had met the imperfection by hypertrophy of its muscular walls.

Of four dissections after death from extreme disease of the heart, with cerebral symptoms—namely, hemiplegia—in two there was softening of the brain, and in two no explanation at all was found of the paralysis, which, however, it should be noticed, happened in one of these eight months before death, and had been recovered from.

Dr. Ormerod believes that, without analysing other series of cases, he might confidently appeal to each one's experience for a confirmation of the statement, that it is in comparatively early cases, where the general symptoms of heart disease are scarcely developed, that sanguineous apoplexy most commonly occurs; not in those patients whom a cold winter sends into our hospitals, loaded with dropsical accumulations, and with venous blood,—cold, livid and struggling for breath. These are rather the subjects of softening of the brain, or of serous effusion, than of sanguineous apoplexy.

If this be correct, it is easy to see how the connection between valvular disease of the heart and apoplexy may have been overlooked at a time when neither auscultation nor morbid anatomy lent such aid to pathology as at present in the recognition of the physical signs and morbid changes, respectively, of valvular disease. And it is, moreover, easy to see how, when this connection was asserted, it should have been denied, on the unjustifiable grounds, that, if the two diseases were really connected, the greater the disease of the heart the more frequent should be the occurrence of apoplexy. But, indeed, the question was not capable of a true solution on such grounds; and a more thorough examination of a correct premises has returned a different answer.

There are other affections of the brain depending on valvular disease besides those which leave organic traces in the forms of cerebral softening and apoplexy. In some of these venous congestion plays a considerable part, while others seem referable to increased arterial pressure. Dr. Latham has described two of these. He speaks of a state of things where "the heart, by the simple vehemence of its action, has the power to kill, and to kill through the medium of the brain." There is intense headache, sleeplessness, delirium, and death by exhaustion. This is the effect of increased arterial pressure, which we must carefully discriminate by the history of the case, and the character of the pulse, may be (for auscultation will help us but little,) from the symptoms of simple exhaustion; for the alternative of life or death may depend on the correctness of our diagnosis.

Another form of disease presents the symptoms of apoplectic coma, suddenly supervening, and when it passes away leaving no paralysis behind. Here "neither serum nor blood has been let loose upon the brain. The whole mischief is effected by the blood still within its proper vessels, by its congestion, retardation, or remora." In this case "the disease of the heart consists of passive dilatation."

Then there are all the symptoms, if not actually attaining to either of these conditions, at least of sufficient importance to demand especial notice,—such as headache, vertigo, drowsiness, mental anxiety, and the spontaneous relief of these—epistaxis. There is epilepsy, always terrible, and not least so when connected with such a hopeless cause as valvular disease of the heart. And there is syncope—a symptom closely connected with advanced disease of this organ, and not uncommonly the mode of its fatal termination. To this, under the head of failure of the heart's action, there will be occasion to recur.

There is little to be added to what Dr. Burrows and others have told us of the pathology and treatment of these affections. As far as a few words can express a general rule of practice in these cases, it is this:—In all cases of disease of the heart we can scarcely pay too much attention to cerebral symptoms which might seem trivial when viewed in connection with disease of any other organ. Under these particular circumstances, drowsiness, headache, and even mental anxiety, claim a consideration which they do not ordinarily possess; and the rule of letting secondary symptoms alone, unless they are dangerous to life, does not apply, for the contingencies which these point to really are dangerous to life in the highest degree.

But when, from whatever cause, the symptoms to be dreaded—namely, those of apoplexy—have supervened, the rule must in some sort be reversed. Now the care must be, not to over-treat the organic disease, as it was before not to under-treat the threatening symptoms. For, not to do more than mention the danger arising from the excessive reaction of an hypertrophied heart on the injured brain, it must be remembered that the lesion may be either softening or sanguineous effusion. And without expressing any definite opinion as to the essential nature of softening, it approaches too near to that of gangrene for us to venture rashly on reducing the already weakened constitutional powers by over-active treatment.

2. *Pulmonary Complications.*—The pulmonary affections dependent on valvular disease of the heart may be either primarily referable to venous obstruction, or they may be contingent thereupon. Of this latter class are pneumonia and bronchitis, pleural effusion, or pulmonary œdema; and to these must be added, though its practical importance could scarcely demand even this passing notice, pulmonary apoplexy.

It is not so easy to assign an exact place to pulmonary emphysema among this class of complications of valvular disease. Probably, in the majority of these cases, it is only secondary to the pulmonary obstruction, chronically and generally resulting from causes similar to those which induce its development in an acute form in the uninflamed parts of the lungs of children suffering from pneumonia. We habitually connect the idea of common asthma with pulmonary emphysema, with which so often, and so often with which alone, it coincides. But in the more complex case of cardiac asthma, Dr. Ormerod thinks we need to be reminded of the separate value of emphysema as a possible element of the mixed results which we are called upon to treat under this name. He would not anticipate on this subject what falls under the head of the treatment of abiding pulmonary obstruction. He would here only point to the existence of pulmonary emphysema, as explaining in some cases, much of the dyspnoea attendant on valvular disease, and in that exact proportion, it must be added, limiting our expectations of the curative effects of our remedies.

With regard to the other complications separately; and first to pleural effusion. Of this the author says little because the knowledge of its existence in nowise affects the treatment or the prognosis of the cases in which it occurs. He considers it a very serious complication, but his observation has not led him to think worse of the case in which it is found than of others, where large effusions exist in the areolar tissue or serous cavities. Nor has observation shown him any more particularly successful method of removing it.

Pneumonia arising under these circumstances has more claims to distinct notice. When occurring at an early period of valvular disease, it is, as far as Dr. Ormerod has seen, very amenable to the ordinary medical treatment, but singularly liable to recur after its removal. More commonly, however, it occurs at a later period, under conditions which forbid any treatment especially directed for its removal. The very unfavorable nature of its prognosis under such circumstances is explicable, partly on general grounds, and partly by

the tendency which it then displays to run into the third stage. More than all the other pulmonary complications of valvular disease, pneumonia is to be considered in the light of an accident,—but as an accident of the most serious nature, always more and more liable to recur, and always more and more dangerous on each recurrence.

As to the other forms of pulmonary secondary complication—namely, bronchitis and pulmonary œdema—their consideration cannot well be separated from that of their immediate cause—their primary form, pulmonary obstruction; for, practically, they are little more than aggravations of this habitual condition, whether we regard their symptoms or their several characteristic morbid changes.

Without underrating all the means and appliances for arriving at, and availing ourselves of a more accurate diagnosis, Dr. Ormerod believes that he should be vaunting a refinement which can find no place in practice, if he spoke of anything more definite on this subject in connection with valvular disease of the heart than pulmonary obstruction. Nosological distinctions almost entirely fail us here, as after death by fever. They cannot be accurately maintained in the gorged œdematous, and obstructed lung, by dissection; and they certainly do not afford us the safest grounds for treatment. The general principles of treatment, and what each of these affections has in common, claim attention rather than the specific differences which secondary causes may have developed in the individual case.

Pulmonary obstruction, then, to adopt this most general term, may be considered in two points of view,—as a temporary or as an abiding condition. Its symptoms as a temporary condition, induced suddenly by violent exertion, or other passing cause, are familiar to us all. It is an accident to which all are more or less liable; and art can do little more, whatever the cause, than aid in maintaining that perfect rest which nature does her best to enforce. But when pulmonary obstruction, though it be temporary only, is induced by the ordinary exertions of life, itself becomes a matter of serious consideration, and the detection of its cause of the highest importance.

On the present occasion we have only one cause to deal with,—namely, valvular disease of the heart. Under these circumstances, it is but a short stage from these temporary attacks to that affection known as winter cough, when the obstruction is present for a considerable portion of the year. And another still shorter step brings us to where this has become the abiding state of things, on which attacks of bronchitis or pneumonia are engrafted from time to time, and under one or other of which life at last terminates.

Still, however short these stages may be in the treatment of such a case, apart from all other considerations, the question of the temporary or abiding nature of the pulmonary obstruction is of importance. For if it be only temporary, we may venture on more active measures, trusting to the reparatory powers of the constitution during the interval before the next attack, than we could do if the diseased condition were permanent.

The mode of relief which nature adopts in cases of pulmonary obstruction, that, namely, by local extravasation of blood inducing hæmoptysis, is the most direct. But there are many objections to

allowing the congestion thus to relieve itself. For the existence of blood and serum in the bronchi tends largely to aggravate the obstruction to respiration. And its removal necessitates frequent violent exertion in coughing. For the serous effusion, to bring relief, must be very abundant, and the expectoration frequent and copious. And though serous excretion may be easy enough, yet blood so effused does not usually come up quietly, being loose as we say; but it is tenacious, being bound up with the glairy mucus which results as a secretion from that condition of parts which induces the hæmorrhage. The relief obtained by abstracting blood, less directly than from the congested membrane itself, may not be so great, but it is incomparably safer, and cupping or leeches to the chest will generally effect the object in view of relieving present pulmonary obstruction. This, however valuable, is yet a mode of relief which we cannot indiscriminately adopt; its fittest application is to the cases where at present the affection is only temporary.

With regard to abiding pulmonary obstruction in connection with valvular disease. Such a case is hopeless from the beginning; all that can be done is to palliate present suffering, or to remove present danger. Obviously, therefore, nothing but the most absolute necessity should induce us to do anything which might at all tax the constitutional powers of the patient. If the vessels are overloaded they may be relieved by cautious abstraction of blood. If the bronchi are obstructed with glairy mucus, or with abundant secretion; they, too, may be indirectly relieved by expectorants and diuretics, either to facilitate the removal of the viscid mucus, or to draw the watery discharge from the blood to another quarter. Or, if present danger to life threatens, we must of course, without regard to more remote dangers, relieve the suffering organ by whatever means, and at whatever cost to the constitution. But if rest and warmth alone will enable the lungs to bear the burden of the circulation, these simple means should be trusted to; for a diarrhœa or a diuresis, the next available means, though powerful instruments for good, cannot be maintained without great exhaustion. They are instruments, moreover, which act with most effect on their first application. It is of the utmost importance to know that such a patient is most readily acted on through his bowels, and such a one through his kidneys, and by such particular remedies: but this knowledge need not be always put in practice. It is only for what warmth and rest will not, or do not appear likely to do, that abstraction of blood, diuretics, purgatives or expectorants, should be employed under such circumstances.

But though we are sorely straitened in our use of means of relief, by the knowledge that the pulmonary obstruction is an abiding condition, this very circumstance, the habitual presence of the malady, enables us to employ a remedy which under other circumstances would not be available. In such cases we may safely employ opium in the face of symptoms which would otherwise contra-indicate its use, and by its means produce a night's rest with present safety and ulterior benefit. And it is no little thing to say that opium is not quite a forbidden remedy in cases of abiding pulmonary obstruction dependent on valvular disease.

How different is the pathology and treatment of the pulmonary and cerebral complications respectively of valvular disease! The brain, as we have seen, may suffer from increased or diminished arterial pressure, or from venous obstruction, and of these the first two are of infinitely the greatest importance. The lungs, on the contrary, suffer, in a large majority of cases, under the like circumstances, from venous obstruction. The cerebral complication is in truth rightly so called, for its occurrence tends only to augment the amount of disease. But in the pulmonary affection we may often recognise a spontaneous attempt at the relief of the labouring heart. Could it well be otherwise than that the treatment of the two should present an equally striking contrast with their pathology? It is so. In the one we do all, even by excessively active treatment, to prevent; for we can do but little to cure, even if the immediate danger be escaped. In the other, too, we may try to prevent; but so far from leaving the actual lesion entirely to nature, observation shows that the best mode of reaching the heart is to direct our treatment to it through the lungs, irrespective of the degree of prominence of the pulmonary symptoms.

It might almost seem, Dr. Ormerod continues, from what has been said thus far of the cerebral and pulmonary complications of valvular disease, that the treatment resolved itself into a simple question, of how much depletion the patient could bear? Not so. But at least depletion is the most important and most available means in such cases. For the other complications our remedies are more numerous, and, as usual, under such circumstances, of less certain application.

Abdominal Complications.—It is only from their position in the same cavity of the body, not from any thing else which they have in common, that the secondary affections of the abdominal viscera are here classed together. For valvular disease of the heart acts injuriously in a very different way on the solid, to what it does on the hollow viscera of this cavity.

Of the importance of the structural diseases of the liver and kidneys, which coincide with valvular disease of the heart, there can be no doubt, were it only for the share they have in inducing dropsy under such circumstances. But in many cases these changes should be placed side by side with the cardiac disease, rather as parallel effects of some common cause, than as resulting, themselves, from the obstruction to the circulation. Such Dr. Ormerod believes is their true pathology in most, and these the most important, instances. But it is, he says, scarcely the place to discuss the principles of their pathology here. Its explanation is a part of that great problem of the effects of chronic inflammation, and degeneration of the products of previous disease, on organic tissues, which is now being worked out by so many independent observers. We scarcely appreciate the importance of the results already obtained, from their having so insensibly grown upon us, and incorporated themselves with all our previous pathological knowledge, which they at once illustrate and advance. The pathology of these structural changes forms part of a great subject, of which valvular disease of the heart is itself but a branch. But as it would exceed alike his limits and his purpose to discuss them here, the

author restricts himself to those few remarks which the secondary affections of the stomach and intestines, and the functional lesions of the solid viscera seem to require.

Constant vomiting and pain in the epigastrium are not unfrequently met with. But for the uncertainty which hangs over the interpretation of the morbid appearances of the gastric mucous membrane, one would feel inclined to connect their symptoms with the intense congestion which this membrane often displays in fatal cases of valvular disease. The remedies which have appeared to the author most deserving of confidence in the treatment of the epigastric pain, are dry cupping, and especially blisters. In attempting to allay the vomiting dependent on valvular disease, Dr. Ormerod has not observed any particular medicaments to possess specific properties in this respect, apart from the general indications on which they have been prescribed. Only once he saw the alkalies, empirically administered for the relief of obstinate vomiting dependent on such a cause, produce much more good than any peculiarity of the case could have led him to anticipate.

Diarrhœa is not a common accompaniment of heart disease; on the contrary, constipation is much more frequently met with. But it has much interest in connection with advanced valvular disease, as being at times the cause of sudden death, under these circumstances, through exhaustion and syncope. This is particularly the case in children,—as far, at least, as induction from a limited number of cases, and a general impression from a more extended observation, would allow an inference. The fact, however, whether observed in children or adults, is explicable on the principle previously adduced, that life maintained under difficulties is destroyed at last by the most trivial causes. We find parallel illustrations in the trivial causes which may suddenly destroy those whose respiration has been long impeded by some tumour or laryngeal affection. And a more painful illustration is found in the rapidly fatal effects on the aged inmates of workhouses, of a slight fall of the external temperature.

With regard to the treatment of the diarrhœa there is nothing to say, for there is nothing peculiar in it, except this one possible contingency of syncope.

SECT. IV.—DISEASES OF THE CHYLOPOIETIC SYSTEM.

ART. 23.—*On Dilatation of the Stomach and Sarcinæ Ventriculi.*

By R. B. TODD, M.D.

(*Medical Gazette*, May 3, 1851.)

The following is an abstract of a lecture upon a case of chronic vomiting believed to depend on organic disease of the stomach. The patient was a literary man, who had long suffered from dyspepsia, indicated by acidity, flatulence, and vomiting. For a year before admission he had been subject to palpitation.

When he came into the hospital he was in a very hæmorrhagic condition; he had purple spots on his legs and arms, and a scorbutic appearance generally; this agreed with the account he gave of himself, as having been reduced by bad living. He was accordingly treated for this scurvy, and took citrate of iron, and better food; his symptoms, however, did not improve, and he suffered much from vomiting. This vomiting came on every day, three or four hours after dinner, when he threw up all the contents of his stomach, nor would he obtain ease till the *whole* had been ejected; he would then remain quite comfortable till another hearty meal, three or four hours after which the same process would be repeated. In this way he went on, constantly throwing up his meals, being tolerably comfortable whilst eating them, and for a short time after, until the process of digestion had commenced, when the pain would begin, and would resist all means of obtaining relief, until by vomiting he had completely emptied his stomach.

A remarkable point in connection with this case was the nature of the matter vomited; it closely resembled yeast in a high state of fermentation; whatever he took, meat, vegetables, bread, the matter vomited had always the same appearance. This very much attracted Dr. Todd's attention, for he had seen this kind of vomiting before, in cases of organic disease of the stomach, and the long continuance of pain and other symptoms of deranged stomach function strongly denoted disease of that organ. On examining with litmus the matter vomited it was found intensely acid, and microscopic examination detected it in a number of small particles, to which attention was first directed by Professor Goodsir of Edinburgh, and to which he has assigned a place in the vegetable kingdom. These particles are little square plates, divided by two or more lines into parallelograms, and these lines again crossed at right angles by others, dividing the surface into little squares, and causing the appearance which a wool-pack would bear from being tightly bound by cords crossing each other at right angles. This appearance suggested for them the name—*Sarcina Ventriculi* (from *sarcina*, a bundle or wool-pack). In every instance where the ejected matter presented the yeast-like appearance and was acid, we found these *Sarcinae* present in considerable numbers. There were also several *torulae*, and numerous starch grains and debris of meat and vegetables.

On examination of the epigastrium no tumour of any sort could be discovered, but percussion showed that the stomach extended to an unparalleled degree over the abdomen. Having ascertained this fact, the author comments on the causes which might induce this condition. It may, he observes, originate in over-feeding, but could not have done so in the present case; a more likely cause he considers to be ulceration with subsequent cicatrisation and contraction of the pyloric extremity. The rationale of the case in fact is, according to Dr. Todd, as follows:—"This man had an ulcer in the pyloric portion of his stomach as long as five years before his admission into the hospital; this was the source of his first attack of hæmorrhage. Some time afterwards another ulcer formed in its neighbourhood; the source of the second attack of hæmorrhage. Both these ulcers have cicatrised, and

have caused a stricture of the pylorus. As the food can pass through this stricture only in small quantities it accumulates in the stomach, and that organ has been dilated by these successive accumulations, and it can relieve itself only by forcibly ejecting its contents by vomiting from time to time. So long as the obstruction exists the stomach will continue to dilate, unless the patient acquires the habit of limiting very exactly the *quantity* of his food; and, if he lives long enough, it may acquire an enormous size."

That the symptoms were not due to cancerous disease, the lecturer thinks may be assumed by the protracted duration of the case, and the marked improvement in the symptoms which took place during his stay in the hospital.

The treatment to which the patient was subjected is thus described by Dr. Todd:

"At first I tried to treat him for this scorbutic state; but the urgency of the gastric symptoms forced me to direct exclusive attention to the stomach. Having tried effervescing medicines and hydrocyanic acid without benefit, I gave him small and frequent doses of creosote and morphia in pills, restricted the quantity of liquids and solids within very narrow limits, and limited his food to milk in small quantities; lean meat, also, in very small portions, with a very little bread. The principle by which I was guided in the adoption of this plan is one which I recommend you to keep in view in the treatment of all diseases of the stomach accompanied by obstruction at or beyond the pylorus: it is this, that you should feed your patient on substances which are capable of *being dissolved in the stomach and absorbed by its walls*, and which do not need the aid of any other portion of the alimentary canal for their digestion. Now milk, and meat, and the gluten of bread admit of being thus digested; and it may be stated, generally, that all azotised or proteinaceous food, if due regard be paid to quantity, need not go beyond the pylorus for its digestion. In the stomach it meets with its proper solvent, and, being once in solution, it may be readily taken up by the blood-vessels of the stomach. But, as I said before, due regard must be paid to the quantity of food given; we must take care not to give more than may be readily dissolved by the amount of gastric fluid which the stomach can easily secrete.

"Again, the patient must be charged to limit himself to the proteinaceous foods, and to take liquid in very sparing quantity. If he take starchy and oleaginous foods, which is now clearly proved are not digested in the stomach, he will accumulate in that organ a quantity of matter upon which it can exercise little or no influence, and which, not finding a ready exit by the pylorus, must excite vomiting; and, if he take too much liquid, he dilutes the solvent fluid of the stomach and impairs its digestive powers, and, moreover, interferes with the absorbing action of the mucous membrane, and, by mechanically burdening the stomach, favours the recurrence of vomiting."

This patient was treated in this manner and with marked benefit. On admission vomiting was almost constant; but afterwards was greatly controlled, and ultimately an interval of eight or ten days would elapse between the attacks of vomiting. The lecturer next directs attention to the vomited matters. He says:

"I must now direct your attention to the vomited matters. They were so peculiar, that you cannot fail to recognise them; they resemble yeast in a high state of fermentation; they were also intensely acid, reddening litmus as muriatic or nitric acid would.

"When the yeasty matter was vomited the little particles of *sarcinæ* were always present; when the other kind of vomiting took place, and especially if it was alkaline, these particles were not present. My clinical clerk, Mr. Beal, watched these points with great assiduity from day to day, and invariably found it as I have described, the presence of the *sarcinæ* being clearly associated with the fermenting condition of the vomited matters.

"What are these *sarcinæ*? Professor Goodsir, who described and named them, places them in the vegetable kingdom, comparing them with certain forms of the genus *Gonium*, with which the zoologist is familiar. This genus, Professor Goodsir believes, as I think with justice, contains both animal and vegetable species,—the former characterised by oral appendages and voluntary movements, the latter by their simple cellulo-globular formation. To these latter, or the vegetable species, *sarcinæ* may be referred.

"Are we to look upon these *sarcinæ* as parasites in the human body? as *causes* of the stomach symptoms under which the patient labours? or as consequences of a certain morbid condition of the stomach?

"It appears to me that the weight of evidence would justify our regarding the *sarcinæ* much in the same light as we do the *Torula fermenti*, or yeast plant,—namely, as accompaniments of a certain form of fermentation. Whatever causes would favour the development of this kind of fermentation, would favour the generation of *sarcinæ*; just as, when you place a quantity of diabetic urine under favorable conditions as regards temperature, it becomes speedily filled with enormous multitudes of *Torulæ*.

"Is there any particular condition of the stomach with which the *sarcinæ* are associated more than another? This question I will answer by reference to my own experience of cases in which these organisms were ejected from the stomach. I have now seen seven cases of this kind. In five the presence of *sarcinæ* was ascertained by the microscope; in two I infer its presence from the character of the vomited matters—namely, resembling yeast or wort in a high state of fermentation, and intensely acid to the smell and to litmus, as well as to the taste of the patient.

"The condition of stomach which was common to all these cases was *dilatation*."

The author concludes his interesting lecture with the following general remarks on the *sarcinæ*:

"Any condition of the stomach favorable to the prolonged sojourn of the food in it seems to form one condition at least for the production of *sarcinæ*. Mr. Busk has related three cases in which he observed these organisms. In two of these there was hernia of the stomach through the diaphragm—a condition which must inevitably interfere with the free action of the organ, and prevent the due transmission of the food in the direction of the pylorus.

"Frerichs found *sarcinæ* in the matters obtained from the stomach of

a dog in which he had established a fistula for the purpose of watching the changes of the food during digestion. The perforation of the stomach, by an artificial opening in it, the edges of which were adherent to the abdominal wall, would certainly not accelerate the transmission of the stomach contents to the pylorus. It is right to add that *sarcinæ* have been found in the stomach and intestines of the bodies of persons who during life evinced no symptoms.

“Dr. Brinton lately found *sarcinæ* in the stomach of a patient who died here of diabetes. This organ is usually of great size in diabetic patients, from the quantity of food which they take, especially of liquids.

“The dilatation of the stomach is favorable to the production of *sarcinæ* only so far as it favours the prolonged sojourn of food in the stomach. The *sarcinæ* are merely accompaniments of a morbid state of organ which interferes with the free passage of its contents in their natural course. As far as we can see at present, these organisms are as innocuous to the human economy as the *torulæ*. Nor, so far as I know, have any special chemical conditions been observed constantly in connection with the development of the *sarcinæ*, beyond the generation of a large amount of free acid, which, in Professor Goodsir’s case, consisted of hydrochloric, acetic, and lactic acids—the two latter in considerable quantity. In both Roger’s and Lyon’s cases free acid likewise existed in large quantity, which judging from smell, was probably lactic or acetic, or both. In Lyon’s case, indeed, Mr. Hardwick found a large quantity of free acetic acid. Still, I incline to think that some previous chemical change in the nature of the fluid secreted by the stomach is necessary to the development of *sarcinæ*. I tried an experiment to ascertain whether a prolonged artificial digestion would give rise to a generation of *sarcinæ*. A large piece of the mucous membrane of the pig’s stomach was placed in distilled water acidulated with a little hydrochloric and acetic acid, and meat, bread, cheese, and a large farrago of ordinary articles of food, were digested in it for three weeks, at a temperature of between 95° and 100° Fahr., but without the production of any fermentation, and with that of very complete digestion. There were no *sarcinæ*, and probably because the digestion was so complete. This experiment was unsuccessful as regards the production of *sarcinæ*; but perhaps experiments conducted on a similar principle, varying the acid and the nature of the food, and renewing from time to time the mucous membrane, in order to imitate the renewed secretion of pepsine which occurs in the living stomach, might lead to the discovery of the chemical conditions most favorable to the production of the *sarcinæ*.

“I would lay it down, then, as the conclusion most interesting to the practical man,—that he need not make himself very anxious about the existence of *sarcinæ* in the ejected matters as a feature of his patient’s malady; but he should learn from it that, from some cause or other, the food lingers too long in the stomach; and he should take measures accordingly, by feeding his patient with small quantities of food, and restricting his diet as much as possible to that kind of food which it is the special office of the stomach to digest or dissolve—namely, animal food.

"As to medicinal remedies, creosote and morphia are those in which I would myself place the most reliance, either separately or conjoined, in order to lessen the irritable state of the stomach, and diminish the frequency of the attacks of vomiting. Alkalies are undoubtedly unfavorable to the generation of *sarcinæ*, while vegetable, if not mineral, acids probably favour it: but no drug will be found very serviceable without the most stringent rules of diet, as regards both quality and quantity."

ART. 24.—*On the Uses of the Neutral Sulphites in Diseases of the Stomach connected with the production of Sarcinæ Ventriculi.* By W. JENNER, M.D., London.

(*Medical Times*, Aug. 23, 1851.)

A case of the disease described in the last article is made the subject of a clinical lecture by Dr. Jenner. The main symptoms are, copious daily vomiting, flatulence, distension, and the train of symptoms usually referred to malignant disease of the stomach. The yeasty appearance of the ejecta induced the author to examine with the microscope, and he found an immense quantity of *sarcinæ* and *torulæ*. Ordinary treatment failing, he determined to give the sulphite of soda, being led to do so by the known effects of sulphurous acid upon parasitic vegetable growths. The effects were gratifying, as regards relief, but the more ultimate results are not ascertained.

Before taking the medicine the patient vomited daily from 40 to 100 ounces of fluid, loaded with *sarcinæ* and *torulæ*: thus on the 1st of April he vomited 100 ounces; on the evening of the 2d, between 70 and 80 ounces, although he had the same morning, from the action of sulphate of zinc, vomited 50 ounces. No vomiting on the 3d. On the 4th, in consequence of the extreme pain and sense of distension, sulphate of zinc was administered.

On the 5th he took half a drachm of the sulphite of potash early in the morning; in the evening he vomited. On the 6th the dose was increased to one drachm. On the 7th he vomited 12 ounces only of acid fluid, on the surface of which there was but a small amount of scum; it contained perfect *sarcinæ*, but no *torulæ*.

From the 8th he took three drachms of the sulphite daily, each dose being given in a drachm and a half of water. At six A.M. on the 9th he ejected from the stomach four ounces; the *sarcinæ* were now decidedly less numerous, and there were no *torulæ*. In the evening of the 6th he again vomited, but the vomited matters were now free from *sarcinæ* and *torulæ*, and there was no appearance of fermentation. Between the 9th and 18th he vomited three times, but on neither occasion did the vomited matter contain *sarcinæ* or *torulæ*.

On the evening of the 18th the sulphite of potash was omitted; and on the 19th he vomited a fluid in a state of fermentation, containing *torulæ*, but no *sarcinæ*. On the 20th he vomited 9 ounces of a similar fluid; these specimens were examined by a most trustworthy observer, Mr. Morris, the physician's assistant. On the 21st there was a thick scum on the surface of the vomited matters, which contained *sarcinæ* and *torulæ* in abundance.

The sulphite of potash, in drachm doses, was again administered; no further vomiting occurred till the 27th, when, without any apparent cause, it recommenced; the vomited matters had their old yeast-like odour and appearance, and were loaded with sarcinæ and torulæ. Dr. Jenner now began to suspect that the man could not be taking his medicine regularly; but on inquiry no omission could be discovered. The medicine itself was then tested, and it was found that it gave off no odour of sulphuric acid, on the addition of a stronger acid. At the dispensary we learned that a fresh stock of the drug had come in on the 20th. On submitting a specimen to Mr. Graham, he found that it contained no trace of sulphurous acid. At his suggestion, Dr. Jenner prescribed from this time the sulphite of soda, a more stable salt, and one less liable to be decomposed either in the preparation or by keeping.

On the 29th he took half a drachm of the sulphite, which on the 2d of May was increased to a drachm, three times a day. There was no vomiting till the 5th. He now took carbonate of soda, in consequence of a burning pain in the epigastrium; on the 13th, 15th, and 16th he again vomited sarcinæ, and the soda was omitted; from this time to the 19th of June the sarcinæ disappeared. During these thirty-three days he ejected 230 ounces of acid fluid. During the former eight days the quantity was 380 ounces.

ART. 25.—*Remarks on the Regurgitating Disease.*

By SIR HENRY MARSH.

(*Dublin Quarterly Journal*, May 1851.)

[On the occasion of a letter from Dr. Little to the author, mentioning an instance of this curious affection, the following general observations were given in reply:]

“Since I first called the attention of the profession to the distinction between vomiting and regurgitation, never before, that I am aware of, noticed in print, I have met with it occasionally in its simple form, very frequently associated with other diseases; and I have held it in contemplation to publish additional observations on this interesting, but generally not dangerous affection. The first case which drew my attention to the subject was that of a boy about eleven years old, who appeared in excellent health, yet, without the slightest perception of nausea, brought back after every meal a certain quantity of the food swallowed; enough, however, remained; for the nutritive function was perfect; he was well nourished, and there was full vigour of mind and body. This led me to investigate further. I found regurgitation without nausea to be a prominent symptom in many cases of hysteria; this is its most frequent complication. I found this symptom to prevail in several cases of incipient phthisis in young females of hysterical temperament: a very frequent accompaniment of spinal irritation, either with or without well-marked hysterical symptoms. I found too, that, in several cases of pregnancy, what was called vomiting, was in reality, regurgitation, either without or with only a

slight amount of perception of nausea. Also, in many cases of pertussis, I found that the rejection of food after the paroxysm of cough was effected by the act, not of vomiting, but of regurgitation. I was surprised at the number and variety of cases in which regurgitation prevailed; it is, I think, essentially a neural affection. I have met with, at the lowest calculation, twenty cases of it in the female for one in the male. I have often wondered that the distinction, so obvious, and, in a practical point of view, so important as that between the muscular acts of vomiting and of regurgitation, should not long since have been recognised, and brought publicly before the profession. Regurgitation is a very remarkable irregularity and perverted—I might say reverted—action of the nerves and muscles of the stomach. As far as my observations have reached, I have been enabled to trace it with certainty, in many instances, to the strumous diathesis, to an imperfection of function, connected, I know not how, with struma. In treatment, the knowledge of this fact is valuable. That which, for briefness, may be termed the anti-strumous treatment, is, as a general rule, the most effective. All that is restorative and invigorating in constitutional treatment is best suited to this affection; hence the value of air, exercise, cheerfulness, the thermo-frigid douche to the spine, well-managed tepid shower-baths, sea air, and, above all, travelling, and change of air and climate, and if with a pleasant party, all the better; also, in some cases, particularly those complicated with any degree of chlorosis, preparations of iron. Chlorosis is frequently accompanied by regurgitation without nausea. I remember one most obstinate case, one of long duration, which yielded completely to the use, both external and internal, of the waters of Schwalbach, in Nassau. In cases of an opposite kind, those in which the hæmorrhagic rather than chlorotic diathesis prevails, bark or the salts of its alkaloid succeed best. It is a curious fact, which I have noted in many, but not all cases, that the stomach rejecting food perpetually, tolerates and retains even nauseous medicines. Where I again to publish ought on this disease, I should change its title; I should call it “the regurgitating disease:” for since I wrote the paper in the ‘Dublin Medical Journal’ (first series, vol. xxiii, page 237), entitled ‘regurgitation without nausea,’ I have met with many cases of regurgitation *with* nausea. I am now attending an unmarried lady aged 40, hysterical, subject to every variety of nervous disturbance and profuse menorrhagia. She rejects daily a certain portion of her food, unchanged by digestion, morsel after morsel, by the act of regurgitation, nor by vomiting. But the peculiarity of her case is, that she suffers from an almost unintermitting nausea: there is no evidence of spinal irritation, nor is there any uterine disease. I have now under my care also another lady, about three or four years older, a martyr, during the greater part of her life, to most distressing spinal irritation, her back scarred with the cicatrices of former innumerable issues, who, though suffering from very constant nausea, regurgitates by little and little a portion of every meal, but does not reject the food by vomiting.

“In two cases of this disease, now under my care, there exists a most remarkable diminution of the renal secretion, with a copious deposit

of urate of ammonia. In one of those the appetite is good; in the other it is extinguished.

"In some cases of this singular affection there is present a symptom which indicates the co-existence of dyspepsia. After a meal the patient is conscious of a sense of fulness,—a load, as it is often termed,—an oppression at the epigastrium. This state continues to be one of great discomfort, until, by successive acts of regurgitation, so much of the meal is rejected as may suffice to relieve this distressing sense of distension. These are the kind of cases in which the symptoms are greatly mitigated by limiting the patient to a certain number of ounces of food at each meal; the amount must, of course, be different in different cases, but the object should be attained of restricting the patient to an easily digestible quantity, so as to take away the necessity for regurgitation; also, in such cases, advantage is derived from enjoining the recumbent position for an hour and a half or two hours after each meal. Curiously enough, I have observed, in several instances, that a patient so affected may dine out and be exempted, during the excitement of a dinner party, from the necessity of disgorging; such is the wonderful influence of mind over nervous action.

"I have observed, too, that this affection of the gastric nerves is sometimes replaced, and I may say cured, by some other form of neural affection. In one case, severe matutinal nervous headaches were substituted for the regurgitation; when the former were established, the latter ceased. In another case (in a patient who ultimately became deranged) regurgitation, intractable and prolonged for months, totally ceased when nervous disturbance and irritation assumed a new form; an hysterical cough, the most loud, roaring, and unearthly in its sounds, dreadful to listeners, not so to the patient, took its place. These facts of substitution elucidate the nature of the complaint. In another very remarkable case, there were first regurgitation, obstinantly persisting for many months; secondly, on its cessation, total loss of smell and taste; lastly, aphonia, without any indication, local or constitutional, of pulmonary disease. The aphonia persisted for about three months. This lady I sent to travel. Her last letter announced the restoration of voice and of health generally; the nerves of digestion, of odour, of taste, and of voice, have in succession, resumed their normal functions. In some cases spasmodic cough and hysteric symptoms co-exist with regurgitation. Subsequent experience has taught me another and a distinct view of this symptom. There are cases of real and often serious gastric disease, in which regurgitation, instead of being the sole or prominent symptom, constitutes only one, and a subordinate one, of a group of symptoms, all indicative of real diseases in the stomach and digestive function.

"I have met with cases characterised by severe gastrodynia, pain on pressure at the epigastrium, epigastric pulsation during digestion, gaseous distension and eructations, impaired appetite, and regurgitation, not only of acid or bitter fluids, but also of masses of half-digested food, and other symptoms of serious and even organic disease of the stomach. Cases of this kind are totally distinct from those I have been describing, and there is one peculiarity by which they may generally be discriminated. Real gastric disease is accompanied by a

progressive emaciation; in the simple regurgitating disease, there is either no emaciation, or it is to an extent not sufficient to excite alarm. In one well-marked case of uncomplicated regurgitation in a girl of 16, the mother said:—‘Is it not a wonder, Sir, that my daughter, though she throws up all her food, looks plump, and fat, and well? She is as active and in as high spirits as ever.’ I told her that her daughter was not in danger, that the disease might be tedious, that enough food was retained to nourish her well, that it was purely an affection of the nerves of the stomach. She was in a state of great apprehension about her. In this case the simultaneous application of two, not large, blisters, one at the epigastrium and the other opposite, on the spine, controlled the regurgitation; but it returned after eight or ten days, and yielded ultimately to a course of electro-magnetism. Generally active purgation injures, as, indeed, does every mode of treatment which tends to depress the vital powers. One case, however, in which a vast quantity of fæcal matter was detained in the colon, was cured by a course of purgatives. I have found a drop of creasote, with fifteenth or a twentieth of a grain of muriate of morphia, in pill, repeated three or four times a day, more frequently useful than, perhaps, any other medicine; yet occasionally it happens that creasote disagrees. The compound aloetic pill I have generally found the best aperient. Opium in full doses, while it deadens the irritability of the nerves, injures the whole digestive function; its good is more than counter-balanced by this evil. In some cases prussic acid, either with or without a few drops of the solution of muriate of morphia, has done real good. Slow eating, perfect mastication, food well selected and restricted in quantity, constitute essentials in the treatment. The reception of food slowly, as by suction through a tube, I have found, in a few cases of extreme regurgitation, advantageous. I have thus given ass or cow’s milk, slowly introduced through a straw or glass tube into the stomach, after the American fashion of swallowing sherry cobbler.

“This affection, like hysteria, sets at defiance all fixed rules as to particular remedies; that which perfectly succeeds in one case utterly fails in another apparently identical. In some cases I have known much benefit to be derived from ices; in one case the disease yielded (apparently at least) to iced coffee. I have also found white bismuth and magnesia particularly useful. Of all remedies, I have thought that travelling, and change of air and place constantly repeated, and in obstinate cases a total change of climate, the most uniformly efficient.”

ART. 26.—*On Fatty Discharge from the Bowels in connection with Disease of the Pancreas.* By ALFRED CLARK, Esq. M.R.C.S. Twickenham.

(*Lancet*, Aug. 16, 1851.)

[The subjoined case has an important bearing upon the physiological properties of the pancreatic fluid. It has recently been advanced by Dr. Bernard (*Abstract*, vol. ix, p. 374) that the office of this fluid is to emulsionise fat, and thus render it more susceptible of absorption by

the lacteals. This case, as far as it goes, sanctions this theory, inasmuch as the disease, and consequently presumed defective secretion of the pancreas, is seen in conjunction with the passage of undigested fatty matters by the bowels.]

Harriet M—, aged fifty-seven, unmarried, the subject of the following case, had been a sufferer for some years before her last fatal attack to constant derangements of the functions of the liver, and from time to time to attacks of gall-stones, many of which, no doubt, were passed, but never detected in the fæcal discharges.

About the middle of September, 1850, when away from home, she first began to notice in the urine (and at that time she supposed she passed it with her urine) masses of yellow, greasy-looking matter, in colour, consistence, and general appearance, exactly similar to yellow salt-butter, floating as small solid cakes (about the size of half-crowns) on the surface of the urine as it became cold. On her return home, which was very shortly afterwards, she came again under the care of Mr. Clark, senior, of Twickenham, and I had an opportunity of watching the case throughout. Her general health at the time was much deranged; the bowels very costive; liver inactive; suffering from frequent attacks of acute pain or spasms in the region of the liver, which we referred to her old complaint (gall-stones), and which were relieved by the use of emetics, anodynes, hot fomentations, blue pill, and mild aperients.

About the beginning of October she first mentioned to us the presence of this fatty matter in the urine, and she was herself quite confident that it came from the bladder; but on making careful inquiries, we found that it was present not only in her water, but that all her motions contained more or less of it, and its presence in the urine was dependent on its passing away unconsciously from the rectum whenever she had a call to pass urine, although no fæcal matter passed at those times.

I gave a specimen of this fatty matter at this time to Dr. Arthur Hassall, who carefully examined it under the microscope, and found it to be perfectly structureless, and, in fact, could not tell it from a piece of butter. The quantity now voided (October 2d) was about three or four ounces daily, as nearly as we could guess; the motions were costive, pale-coloured; (but no discoloration of the skin from absorbed bile: there was a deficiency in its secretion;) the motion very offensive; urine scanty and high-coloured; pulse 76, weak; she herself much emaciated, having been more or less ill for a year previously.

After a short time the matter oozed away continuously from the bowels, saturating her linen and bed-clothes; it was of a most offensive odour, and quantities of it were passed with each motion, which had now become very fluid, pale-coloured, and offensive, the fatty matter floating to the surface, and forming a solid cake on cooling; the greatest quantity discharged at any time per diem must have amounted to eight or nine ounces.

During the first month of her illness, she took two or three times a week small doses of blue pill, or mercury-with-chalk, with mild aperients, and the bitter tonics; afterwards the iodide of potassium; but nothing appeared in any way to arrest the discharge of fat, nor

did changes in her diet appear to have any effect upon it. Emaciation still continued, but she suffered no pain; in fact, she said she was freer from it than she had been for years.

Nov. 20th.—Dr. Chowne saw her in consultation. His opinion confirmed our own, that there was no doubt disease of the pancreas, whether of a malignant character or not was doubtful, together with a very inactive state of the liver, in all probability dependent on organic changes in its structure; and, more as a palliative than with any hopes of producing a cure, he recommended olive oil in two-drachm doses twice a day, with three grains of mercury-and-chalk every night. We fancied that the oil at first in some measure arrested the discharge, and we increased the dose to six drachms twice a-day, but in a few days it returned with all its former violence.

On the 21st of January, eight hours after death, I made a post-mortem examination, assisted by Mr. Clark, sen., of Twickenham, and Dr. Kershaw, of Kingston. The body was much emaciated; the legs anasarous. On opening the chest, we found a large quantity of fluid, of a pale-red colour, in the cavities of both pleura, the pleura speckled over with minute spots of tuberculous-looking matter, in a state of softening; the lungs themselves perfectly healthy; no adhesions. Heart soft and flabby; pale-coloured; there was, in fact, fatty degeneration of it; and the pericardium contained about four ounces of fluid. On opening the cavity of the abdomen, we were surprised with the apparently perfectly healthy state of all the viscera; but on removing the omentum from the lower edge of the stomach, and drawing down the intestines, we brought into view a small tumour, about the size of a hen's egg, imbedded in some fatty tissue, and situated between the left end of the stomach and the upper end of the spleen, and attached to the extremity of the pancreas. On cutting into this, we found it to be an encysted tumour, containing a mass of dark chocolate-brown substance, yellow in the centre, and glistening with small particles of cholesterine. The pancreas was completely altered in structure, being converted into a mass of nothing else but fatty tissue, with no traces of the original glandular structure. The whole of the liver, pancreas, duodenum, stomach, spleen, and tumour, were now removed from the body, and examined more in detail. The liver was pale, easily broke under the fingers, and presented the usual appearances of a nutmeg liver; gall-bladder very small; the coats much thinner in the posterior part; quite empty of bile, but contained two gall-stones of the size of horse-beans; bile-ducts empty; and the ducts in the substance of the liver contained but little bile; the whole liver being rather smaller than natural. The duodenum (perfectly healthy) was now slit open, and the opening of the ductus communis choledochus observed, and a probe being introduced, readily passed into the cavity of the gall-bladder; no opening for the pancreatic duct could be observed; the ductus communis choledochus, and its continuation the cystic duct, were now laid open, and beyond the opening into the duodenum were sufficiently large to admit the little finger; the pancreatic duct did not open into this canal, but where it should have opened into the duodenum, but external to it, we found the remains of the duct, containing in its canal, and completely embraced by it, a mass of

calcareous matter, irregular in form, rough, and of a glistening white colour. On carefully cutting down on this, and examining the interior of the duct, we found that it terminated, just external to the duodenum, in a complete cul-de-sac, the canal being pervious towards the pancreas; there was no fluid in the duct; the mass of calcareous matter, consisting, in all probability, of carbonate and phosphate of lime, had most likely been formed in the pancreas, carried by its duct to its extremity, had failed in passing into the duodenum, and, increasing in size, at last had completely obliterated the duct; during which time, the pancreas, failing in getting rid of its secretion, had been gradually undergoing a change in its structure, and at last was converted into the fatty mass which it presented to us at the post-mortem examination. Whether the liver had acted at all during the last months of her life, is doubtful. The gall-bladder was hardly in the slightest degree stained with bile, nor were any of the ducts. The intestines generally quite healthy; the kidneys and the uterus healthy; the right ovary diseased, enlarged, and connected with it a small cyst, about the size of an orange, containing a straw-coloured fluid.

Remarks.—The foregoing case is interesting, as illustrating, in a very marked manner, the connection of disease of the pancreas with fatty discharge from the bowels; but in this case, as in all others reported, there was an evident deficiency of bile; but the generally healthy state of the other viscera prove that the presence of this fatty matter is dependent on absence of the pancreatic fluid, together with deficient supply of the biliary secretion; though in what way this deficiency acts in determining the secretion or convulsion of other matters into this fatty substance, it is impossible to say.

Dr. Bright, in the eighteenth volume of the '*Medico-Chirurgical Transactions*,' reports several cases, in all of which there was decided malignant disease of the pancreas, and also of the duodenum, and from a general consideration of all his cases, arrives at the conclusion that, as regards the symptom of fatty discharge, you must have for its production—"Disease, probably malignant, of that part of the pancreas nearest to the duodenum, and also ulceration of the duodenum itself," these two conditions being peculiar to all his cases; but there also appears to have been a deficiency of the biliary secretion.

He, Dr. Bright, does not affect to decide whence the peculiar fatty matter is derived—"whether it is to be considered as a vitiated secretion from natural structures, which must here be chiefly mucous; or as a discharge from the diseased and ulcerated parts; or as the product of defective digestion of alimentary matter, depending on the imperfect supply or irregular mixture of the biliary and pancreatic or other secretions; or on the perverted and impeded action of the duodenum."

He concludes his observations on the disease in question with the following paragraph:

"All of those in which the oily evacuations have been observed have been cases of decided malignant, and, as far as the pancreas is concerned, we might say, of schirrous disease. Now it is a fact which I have observed in several cases, that the bile is very apt to undergo that change which leads to the deposit of concretions of adipocire in

the gall-bladder, in patients labouring under schirrus, as females with schirrous mamma, for instance, where the disease either has or has not attacked internal organs; and I think it arises as a fair question, therefore, whether the peculiar appearances of the alimentary discharges may not depend on the same condition, be it what it may, which leads to the unnatural deposit in the gall-bladder; and should this prove to be the case, the symptom would be diagnostic of the nature of the diseased action, rather than of its effects."

I think the history of the case just reported will decide that it is not absolutely necessary that there should be schirrous disease, either of the pancreas or of the duodenum, for the production of this fatty matter.

In the same volume is a case reported by Mr. Lloyd, in which there was a cancerous state of the duodenum, which had nearly obliterated the canal, and completely obstructed the duct of the pancreas, as well as that of the liver. The nature of the fatty discharge was precisely similar to that taken from our patient, a specimen of which I showed to Mr. Lloyd.

Dr. Elliotson reports also several cases in the same volume, some from his own practice, others from different authors, and one in which the fat was supposed to pass from the bladder; but may not the patient have been deceived in this respect, in the same way as mine was?

From a comparison of all his cases, he arrives at no certain conclusion as to the source of the discharge, but refers it to the liver or intestines, and considers it a necessary condition that there should be disease in the canal, in the liver, and the pancreas, and appears to be rather inclined, from the unctuous nature of most biliary secretions, to refer it to the liver.

He does not consider "organic disease of either the alimentary canal, or any other part," as being necessary for the production of the disease, the truth of which opinion the case just reported tends to confirm.

ART. 27.—*Case of Obstruction of the Bowels. Treatment by Electro-Magnetism.* By Dr. CHARLTON, Newcastle.

(*Medical Gazette*, Sept. 12, 1851.)

The following instructive case was read at a meeting of the Newcastle Pathological Society.

On the 20th of October, 1850, the author was summoned to a case, the prominent symptoms of which were obstruction of the bowels with vomiting, ultimately of faecal character. Purgatives, as is too often the case, had been persisted in. On the fifth day, the patient being in an almost hopeless state, the author obtained the consent of the friends, and of the lady herself, who exhibited uncommon firmness throughout, that nothing further should be done to irritate the intestines; that ice should be freely taken by the mouth, but no food or medicine; and that the patient's strength should be sustained wholly by nourishing enemata of beef-tea. This was on the 4th of November. The retching

now gradually subsided; the bowels continued to be a good deal distended, but were still not painful on pressure. Ice afforded great relief to the thirst. Small quantities of fæcal matter were vomited for two or three days, but these too ceased, though the bowels were still obstinately closed. The patient continued for six days then free from suffering, but extremely exhausted, till the nurse informed the author, on visiting her on the 10th of November, that after much rumbling of the bowels during the preceding night, a large quantity of flatus had passed, and that the bowels were less distended. Finding this to be the case, he regarded it as an indication for further proceedings, and ordered magneto-electricity to be applied; it produced slight vomiting, and much commotion in the bowels, but five hours after a copious evacuation by stool of hard scybalous matters. During the night the patient had a still more copious evacuation; and the next day she ventured to take a small quantity of beef-tea, which produced no sickness. The pulse now increased in strength and diminished in frequency, and she gradually regained her health in about ten days after this date, having had no untoward symptoms subsequently. The author remarks that the above case tends to illustrate still further the advantages of delay in cases of this nature, and the utter inutility of employing severe purgatives where symptoms such as we have described prevail.

SECT. V.—DISEASES OF THE GENITO-URINARY SYSTEM.

ART. 28.—*On Hæmaturia.* By Dr. G. OWEN REES.

Medical Gazette, July 1851.)

[On entering upon this subject, which forms one of his Lettsomian lectures, the author remarks that blood may appear in the urine either in its entire form or in its colourless elements only. In the former case the urinary passages, prostate gland, bladder, and kidneys, all require examination. When the bladder is suspected surgical means are, of course, demanded. The author also enters briefly into the microscopical appearance of blood-corpuscles, as well as of pus and mucous corpuscles, the presence of which may occasionally complicate the diagnosis. He then continues:]

When blood is present as a deposit in urine, in any quantity, we may be sure that albumen exists in solution; and it is important that we should know, within certain limits, the corresponding degree to which we may expect the urine to be albuminous for any given quantity of red corpuscles which may appear in it. An approach to tolerable exactness may be attained by practice and attention to this point; and it is one of great value in the diagnosis of urinary diseases. When we boil urine containing albumen, if it be acid, as is generally the case, a precipitate is produced. Now when blood is present, you will be surprised how much of it is required to produce an amount of albuminous precipitate such as characterises cases of ordinary albu-

minuria. Unless, indeed, the urine present the appearance of being made up in very large proportion of blood, the amount of albumen will generally be trivial. This will not appear extraordinary to those who are in the habit of observing how much show a little blood can make; and the quantity of albumen in the urine of morbus Brightii may well appear comparatively great, when it often amounts to as much as indicates the disintegration of several ounces of blood per diem; and one ounce of blood will make a great show in the quantity of urine passed in twenty-four hours. The importance of paying attention, then, to this point, principally consists in our being able occasionally to detect the morbus Brightii by showing an amount of albumen in the urine far above that indicated by the red corpuscles present.

Returning to the pathology of the subject, let us now assume that careful examination of the bladder and prostate gland has satisfactorily shown that the kidneys or ureters are the source whence the blood contained in the urine must be derived, and consider to what conditions of those parts the hæmorrhage should be attributed. First as regards idiopathic hæmaturia. This bleeding from the surfaces of the kidney, without any especial cause beyond exposure to cold or to the vicissitudes of climate in warm and damp localities, has been considered as rare by most writers. For my own part, it has so frequently occurred to me to detect the cause of such hæmorrhage in lesion of some organ, that I am much inclined to deny hæmaturia ever occurs, except as an indication of decided disease of the kidney or other part of the urinary apparatus. It is true that idiopathic hæmaturia sometimes occurs, together with hæmorrhage from other mucous surfaces, in those who ascend to great heights, and who consequently suffer the loss of that amount of atmospheric pressure which preserves the conditions of equilibrium necessary to the safe circulation of the blood; but we may at once exclude such cases as these from the consideration.

With respect to the appearance of the urine, Dr. Prout considered that, when blood tintured the whole fluid, appearing equally dissolved throughout it, that the kidneys were generally involved. This is an observation which experience certainly verifies. When such an appearance is observed, however, it co-exists or alternates generally with blood as a deposit, and we may conclude that there is calculus in the kidney, or that the organ is the subject of other diseased condition, attended either with great congestion, granular deposit, or malignant disease. The detection of the real state of matters becomes very important in such cases. The symptom is a prominent one, and the patient's friends are sure to press the practitioner urgently for his prognosis. Now, though in most cases, if calculus be present, the history or severity of symptoms will assist us at once to the truth, yet it sometimes happens that such evidence is not afforded; and this is more especially the case when oxalate of lime calculi are contained in the kidneys. Under these conditions the urine may be bloody, and no other symptoms observed beyond dull lumbar pains. If oxalate of lime crystals exist in the urine, there is also pain in the penis, which does not affect the glans penis, as in stone in the bladder; but, on the contrary, is most plainly felt at the root of the organ,

Now, though in these cases the hæmorrhage will generally follow upon some unwonted exertion, still it is not always so, and the case is thus greatly obscured; for we lose a most important adjuvant to our diagnosis. If the hæmorrhage is the result of any of those chronic states of disease to which the name "morbus Brightii" has been given, we may easily detect that it is so, for then the hæmorrhage which may occur will soon be found to give place to other conditions, in which the colourless matters of the blood alone become effused. We have here only to wait; and, whenever the urine may be excreted of its natural colour, to test it for the presence of albumen; and, if this principle then be present in any quantity, without the colouring matter of the blood, we may be nearly certain that the further progress of the case will be marked by the continued excretion of natural-coloured urine containing albumen, and not by hæmorrhage, and that the patient is suffering from some form of the morbus Brightii.

If, however, the urine, on becoming of its natural colour after an attack of hæmaturia, does not prove to contain albumen, then we may feel nearly sure that the hæmorrhage proceeded either from a calculus in the kidney, or some malignant disease of the organ.

The diagnosis between these two conditions must depend on the observation of the following points:

1st. In malignant disease the blood is generally passed in larger quantity than in calculus of the kidney.

2dly. There is more frequent tendency to nausea *on slight occasion* than in calculus disease.

3dly. Microscopic examination of the urine will frequently show pus or mucus in excess, if there be calculus; whereas, in malignant disease, this sign does not so frequently exist.

4thly. The appearance of those suffering from malignant disease of the kidney is nearly always indicative of a state of anæmia more or less advanced.

5thly. In calculus, hæmaturia generally follows upon some unwonted exertion.

6thly. Careful examination of the abdomen will frequently lead to the detection of tumour if there be malignant disease of the kidney.

With respect to this last indication, I have after careful examination, succeeded in detecting tumour of the abdomen in several cases in which the origin of the hæmaturia was very obscure. It is always right, indeed, to make this kind of exploration whenever such cases are presented to us, and it should be several times repeated if nothing be detected at first. The bowels should be emptied by the action of aromatic purgative medicines, and the patient so placed during examination that the abdominal muscles be rendered as flaccid as possible. With respect to the use of purgatives, their exhibition previous to these explorations is often absolutely necessary before we can hope to arrive at the truth, should renal tumour be commencing. I lately saw a case of this kind, in which the origin of the hæmaturia was very uncertain until purgatives had been exhibited for several days, when the whole mystery was cleared up by the discovery of a tumour in the left lumbar region. In this case, as in several others I had previously seen, I was at first so completely foiled in detecting a cause for the

appearance of blood in the urine that I was nearly making up my mind that the whole mischief must consist in transudation from the urinary mucous surface. There was such slight lumbar uneasiness, and the history of the case was so deficient in symptoms, that it was scarcely possible the hæmorrhage could have been caused by the presence of a calculus, and the renal tumour had become developed with scarcely any other symptom than hæmaturia.

In this class of cases it sometimes happens that we are unable to detect any enlargement of the kidney up to a very late period. The symptoms will be slight. There may be, perhaps, more irritability of stomach than is usually characteristic of dyspepsia,—slight lumbar pains, and lassitude. The urine may contain blood but seldom, and weeks, and even months, pass without hæmorrhage. I speak now of such hæmorrhage as can be detected by the naked eye. If, however, we have recourse to microscopical examination of the urine from time to time, the case appears differently. We shall then find that blood-corpuscles are nearly every day passing away in small number. These may be detected by allowing the urine to subside in a tall glass vessel, and then examining the deposit. It is always right, when hæmorrhage has been observed from the kidney, that the urine should be examined at intervals by the microscope. We thus have a means of ascertaining more correctly the effects of exertion in the production of hæmorrhage. A patient may tell you that he can ride, run, or row, without producing hæmaturia; but after such exertion, if he be the subject of calculus in the kidney, we shall always be able to detect blood-corpuscles by the microscope, even though he betray no other symptom of the disease. It must be remembered, that in treating of the diagnosis between calculus in the kidney and malignant disease of the organ, I am directing your attention to such cases of calculus as you will only occasionally meet with. In general the diagnosis is easy enough. Thus the patient will generally have, in connection with hæmaturia, severe loin pains, causing vomiting and retraction of the testicle, and other symptoms, clearly pointing out the true nature of the case; but the equivocal cases I am here alluding to are sufficiently common to make their study of some importance to the practitioner.

To sum up, I should say, in the first place exclude from the consideration cases of what has been called idiopathic hæmaturia, which can scarcely exist under ordinary barometrical conditions; secondly, determine that the case does not belong to the morbus Brightii, by ascertaining that when the red particles cease to appear the albumen also leaves the urine; and, thirdly, when the hæmorrhage observed is placed within these limits, determine whether it be owing to calculus in the kidney, or to malignant disease, by especial attention to the following points:—The appearance and complexion of the patient; the presence or absence of nausea on slight occasion; the presence or absence of pus and mucus in the urine mixed with blood-corpuscles; and, lastly, by careful exploration of the abdomen for the detection of tumour.

Now as regards the treatment of the two forms of hæmaturia I have been speaking of,—viz., that produced by calculus in the kidney, and that which is the consequence of malignant disease.

From what I have already brought before you with respect to the treatment of alkaline urine, as produced by irritation of the urinary mucous surface, you will at once perceive that the condition brought about by the existence of a calculus can never be benefited by the exhibition of other than demulcent and alkaline remedies. It matters not how the calculus may be composed,—be it uric acid, oxalate of lime, or phosphatic,—be it soluble in acids or alkalies,—we cannot treat it chemically while in the kidney. Our object must be to render the urine as unirritating to the mucous membrane as possible, and enable that membrane thus to bear the presence of the calculus with as little inconvenience as possible. There is another indication, however, which we answer by this alkaline and demulcent plan, and a most important one. It consists in the relaxation of the spasm of the canal. By effecting this, a small calculus may often be brought away which otherwise might remain to increase, and perhaps destroy the patient. It is with this view that we should combine our demulcent and alkaline remedies with such sedatives as the patient can bear without disturbance of stomach. Our most favorable result, of course, will be the expulsion of the calculus. Next to this we must hope that it will become encysted, and, by being so fixed in the kidney, cease to cause irritation; while we have to fear, as the worst result, the setting up of inflammatory action in the body of the kidney. This may terminate in the effusion of lymph in the tissue of the organ, and to a subsequent contraction of the inflamed part; and sometimes the patient may be so fortunate under these circumstances as to have the calculus which has caused the acute nephritis, should it be a small one, impacted in the kidney, so as to create no further irritation. In a great many of these cases, however, the acute nephritis terminates in suppurative disease; and if there be any constitutional imperfection dependent on strumous or syphilitic taint, this is the way in which we may generally expect the case to end. All we can do under these circumstances is to support our patient, exhibit opiates, and render the renal secretion as unirritating as possible. It is absolutely necessary that such persons should avoid exercise in any way beyond that necessary to walking gently, or exercise in an easy carriage. Neglect of this doubles the danger to the patient, while the difficulty of enforcing the injunction is often very great.

With respect to the treatment of cases in which the hæmaturia depends on malignant disease of the kidney, of course we cannot proceed with any hope of cure; but much may be done by attention to the general health, and by relieving those symptoms which arise as the result of the hæmorrhage and the impaired state of the chylopoietic viscera. The anæmia so often noticed in these cases, which causes dyspnœa on slight exertion, and restless nights (from the facility with which any error in diet produces palpitation and throbbing of the carotids), may be, to a great extent, combated by the exhibition of iron in some palatable form. Perhaps the best preparation for the purpose is the *Tinctura Ferri Sesquichloridi*, taken in doses of from $\mathfrak{m}\text{x}$ to $\mathfrak{m}\text{xx}$ three times a day, the bowels being watched the while, and kept regular by the exhibition of mild and aromatic laxative medicines.

It may be objected to the use of iron that it frequently tends to produce hæmorrhage, and that we ought scarcely, therefore, to exhibit it; and it is quite true that care is necessary on this point. Watch the effects of the remedy, however, and you will constantly find you can exhibit it with advantage; that it will not induce hæmaturia, and especially if it be exhibited in the form of the sesquichloride of iron tincture. With regard to the use of styptics, they frequently appear useful in cases where the disease is not much advanced. One of the best I know, and which I have used several times of late, is the tannic acid, exhibited, if necessary, at intervals between the doses of iron in the form of pill. The dose should be from four to eight grains three times in the day. I may here remark, with respect to the use of this remedy, that, if you wish it should reach the stomach as tannic acid, you must not exhibit it in solution. You may, if you do so, have the good luck to give the first dose before it becomes changed; but tannic acid is rapidly converted into gallic acid when dissolved, and the best means of exhibiting it unchanged is in the form of pill.

I now come to the consideration of those cases in which the urine contains the colourless matters of the blood; and inasmuch as, unlike hæmaturia, these indications do not admit of being detected so palpably by the senses, they are very frequently overlooked.

I will first bring before your notice the symptom of albumen in the urine,—a condition to which the attention of the medical profession has now been directed for many years, and which forms the leading feature of the disease called morbus Brightii. I shall not now describe the method of detecting the presence of albumen, but, assuming the fact established, I shall beg your attention to the pathological considerations of which it is suggestive in the present state of our knowledge.

When Dr. Bright published his views on this subject, and declared his belief that an albuminous condition of the urine indicated a peculiar state of kidney, which commenced in congestion, and terminated in the deposit of an adventitious matter in the tissue of the organ, some doubt was felt among pathologists as to the symptom indicating the condition described with any great degree of accuracy. It was thought improbable that the state of the kidney, noticed by Dr. Bright, could be the only cause capable of producing albuminous urine; and some were even so bold as to assert that many articles of food would produce a similar effect on the excretion. The exhibition of certain remedies also, and various pathological conditions, were quoted, which theory suggested as capable of bringing about the result; and, what with intrepid assertion on the one hand, and plausible reasoning on the other, considerable doubt was, for some time, cast on the diagnostic value of albumen in the urine. Among the articles of diet said to produce albuminuria I may mention pastry, milk, and cheese. Among medicines, some diuretics were thought capable of producing a similar effect; and mercury, if exhibited to salivation, was confidently spoken of as a cause for albuminous urine. The pathological states which have been at different times quoted as causes are very various and

very numerous:—typhoid and typhus fever; certain forms of rheumatisms; severe inflammatory affections, &c.

First, then, with respect to articles of diet:—Neither milk, cheese, nor pastry, will produce albuminous urine; nor have I yet been successful in obtaining, from those who have made these loose statements, a specimen of urine which gave the remotest indication of the presence of albumen, provided it had been previously shown free from that principle. I have also failed to detect albumen in the urine where diuretics have been given medicinally, though it is possible that in poisonous doses some of these may produce the effect. In poisoning by cantharides, albumen appears with blood in the urine: but such cases as these are scarcely likely to confuse your diagnosis. With respect to mercury, the impression was so strong on the minds of some that it always produced albuminous urine when exhibited in large quantity, that a few years ago I was at the pains of carefully examining the urine of persons who were undergoing salivation for syphilitic disease at Guy's Hospital, taking care to test the urine of each case before the exhibition of the remedy. In these experiments I entirely failed to detect albumen, and I have no doubt that the conclusion above alluded to was arrived at on theoretical grounds.

ART. 29.—*On Alkaline Urine.* By Dr. G. OWEN REES.

(*Medical Gazette*, July 4, 1851.)

With respect to alkaline urine generally, it may be stated that whenever it is excreted it is attributable to one of the following conditions:—

1. Disease of the spine from injury or other cause.
2. Dyspepsia.
3. Disease of the urinary mucous membrane.
4. The ingestion of medicines, or of aliments containing alkaline salts or salts of vegetable acids.

A fifth—viz., the discharge of an excess of soda, or potassa, or ammonia, from constitutional causes—is mentioned by Dr. Prout. This, however, Dr. Rees is now satisfied must be regarded as produced by aggravated disease of the mucous surfaces, and therefore should be included under the third heading.

He proceeds to consider these conditions seriatim.

First, then, when disease attacks the spinal column, the cord becoming subsequently affected; or when, from external violence, the nervous centre suffers immediate injury, the urine will become alkaline. Various theories have been resorted to in order to explain this. That the secretion of the kidney may become changed owing to disease in the neighbourhood of those nerves of organic life from which it derives its energy, no one will be prepared to deny; this may possibly happen; but there is much to lead us to suspect that another cause than this has the principal share in bringing about an alkaline condition of the urine. Dr. Rees alludes to an increased action of the mucous surface, probably brought about in order to protect the ureters and bladder as

much as possible during the passage of acid urine over them. The membrane which in its healthy state could bear the stimulus of the healthy urine has now partly lost its vitality, and an alkaline fluid is secreted for its defence. The view he has here taken is strongly borne out by what we observe in all affections of the spinal column terminating in disease of the medulla spinalis and its membranes. The urine first becomes alkaline; as the disease advances, large quantities of mucus appear; and post-mortem examination of the urinary organs will show an aggravated disease of the mucous membrane lining the pelvis of the kidneys, the ureters, and bladder.

Dr. Rees begs the particular attention of those engaged in surgical practice to the view here taken of the relation of alkaline urine to spinal injury. It would point to the propriety of using alkaline and demulcent remedies in such cases for the relief of the urinary symptoms, and the exhibition of alcoholic support with considerable care, and in the least irritating form.

Secondly, with respect to the alkaline condition of urine caused by certain forms of dyspepsia. This, which is accompanied with the deposit of the earthy phosphates, has been regarded by Dr. Prout as indicative of a tendency to the waste of nervous matter, and a general debility of constitution; and it is certainly true that we generally meet with it in those who have been overworked, either mentally or physically. There is a point of view, however, in which this form of urinary disease has not been regarded, but which yet seems to bear strongly on its pathology.

Now the researches of Liebig have shown that the gastric juice in all probability owes its acidity to the same acids as those which enter into the composition of muscular structure—viz., the phosphoric and lactic; and from whatever source these acids may be derived, it is certain that their proportion in the urine is governed by the necessity there may be for their expulsion from, or detention within, the organism for the discharge of the functions of life.

The constitution of the urine is such, that its degree of acidity (taking the whole result of twenty-fours) may, to a certain extent, be regarded as the measure of the acidity of the stomach, or of the quantity of the phosphoric and lactic acids expelled; and this would seem to point to the deficiency of acidity in the excretion as an indication of disorder of the stomach interfering with the secretion of the gastric juice in its healthy condition. Dr. Rees believes this alone to be the cause of alkaline urine, so far as what are called constitutional causes are concerned; and he does not believe the deposit of phosphates, when it occurs in alkaline urine without disease of the passages to indicate any thing more than this state of stomach. Under these conditions, the urine is, of course, secreted *alkaline by the kidneys*, and is not, as in disease of the passages, *rendered alkaline after secretion*. This alkaline or neutral state may be regarded as indicative of nervous action being defective, and secretion of the gastric juice not going on as it should do in consequence. Whatever view we may take, however, we must regard the disease as more immediately the consequence of a malsecretion on the part of the stomach, probably

caused by the circulation of a diseased blood through the structure of the organ.

With regard to the term "phosphatic diathesis," Dr. Rees does not consider that the deposit of the earthy phosphates is any thing more than an indication that the urine is neutral or alkaline. The deposit of these earthy salts has led to the erroneous idea that they are present *in excess*, and to the adoption of the above term. There are few diseases, however, in which the earthy phosphates are really present in excess, and these are not allied in any way to the class of cases which come before us as urinary disease. Thus the urine is often *acid* when large quantities of earthy phosphates are escaping, as in *mollities ossium*.

Dr. Rees is by no means inclined necessarily to connect alkaline urine with severe nervous irritation, with wasting, and other symptoms of vital decay. Many cases in which we observe the secretion of such urine with phosphatic deposits show no such condition, the debility not exceeding that which characterises many forms of dyspepsia: while, on the other hand, we often see great depression and loss of vital power, with wasting, as when oxalate of lime appears, and no tendency to alkalinity.

With respect to the treatment of that morbid state of the system which induces the excretion of this kind of alkaline urine, the administration of the mineral acids is by far the most valuable means we possess of restoring the stomach to its healthy function. In many cases this alone will be sufficient, if continued for a few weeks; but in old cases, or where relapse has been frequent, it is highly desirable to have recourse to mild alterative treatment in addition. For this purpose nothing can be better than the use of the bichloride of mercury in small doses, taken at bedtime in the form of draught, and in combination with the tinctures of rhubarb and bark. This will be found greatly to assist the mineral acids in restoring the healthy secretion of the stomach. The bowels should be closely watched in this disease, and their action kept up by warm stimulating purgatives.

Dr. Rees then proceeds to consider that alkaline condition of urine which is connected with disease of the mucous surfaces lining the kidney and ureters, and in which the urine is secreted acid, but becomes alkaline in consequence of the changes subsequently effected in it. Here, in addition to the alkalinity of urine, we have symptoms not so much characterised by dyspepsia as by irritation of the urinary canals. There are dull pains in the loins, and down the sides of the abdomen, occasional dysuria, and not uncommonly the skin becomes inactive and dry, or subject to occasional excessive excretion. The urine generally contains mucus in excess, and sometimes pus in considerable quantity; and in the older and more aggravated forms of the disease the miseries consequent on calculus in the bladder are often added to other evils.

It has been believed up to the present time that when urine has been secreted acid by the kidney, and has subsequently become alkaline, owing to the action of the mucous surfaces, the cause of the alkalinity consists in the evolution of carbonate of ammonia, produced

by the decomposition of urea. The mucus poured out by the mucous membrane has been regarded as a sort of ferment; and by its action carbonate of ammonia has been supposed to be formed by a disturbance in the arrangement of the elements of urea. Now, though it is nearly certain that the urea undergoes this kind of decomposition when the urine is long retained in the bladder or urinary passages, it is highly improbable that such decomposition always takes place in the cases he is now speaking of; and he thinks he shall be able satisfactorily to prove that we have no occasion to resort to such mode of explanation. If we take healthy urine of its full acid reaction, and add liquor potassæ to it carefully, we shall find that when we have neutralised its acidity, ammonia is immediately evolved. There is no occasion to use caustic alkali, however; for, if we add a solution of basic phosphate of soda instead, which is a very mild form of alkaline solution, we still observe that ammonia is given out in great quantity. If we now test the reaction of this urine, we find that the reddened litmus paper becomes blue, indicating the presence of an alkali; but on drying, it will again assume its red colour, showing that the alkaline reaction was caused by ammonia, and not by fixed alkali; but, it may be asked, how could this happen, since we used *fixed* alkali to produce the alkalinity? The fact is, that our fixed alkali is all neutralised by the acids with which the ammonia was previously combined, and the volatile alkali is set free to exercise its power on the reddened litmus. Thus, supposing the ammonia, to have existed as phosphate and hydrochlorate in the urine, the fixed alkali has combined with the phosphoric and hydrochloric acids to form *neutral* salts of the fixed alkali, leaving the ammonia the only free alkali present. So it is that the mucous surface will occasionally act under inflammation: the alkali contained in the mucous secretion is fixed alkali, but its presence produces free ammonia, while the fixed alkali itself is neutralised to form salts with the acids which were previously combined with the ammonia. This state of things will always be observed when the mucous surface is not pouring out any very large quantities of its alkaline secretion. When, however, there is an excessive discharge of alkaline fluid, then there is a change with regard to the action of reddened litmus, which will now become permanently tintured blue. No drying will restore its red colour, and we therefore at once observe that fixed alkali effected the change. This has happened owing to the excess of fixed alkaline matter poured out by the mucous membrane having more than neutralised the acids of the ammoniacal salts contained in the urine. All the ammonia has been set free, but the fixed alkali has been secreted in such great quantity as to neutralise both the free acid of the urine, and the acids of the ammoniacal salts. Dr. Rees begs attention to this circumstance, as important distinctions connected with general pathology have been made in reference to these two conditions; whereas he firmly believes there is no necessary difference whatever *in kind* between the two states, and that they are always merely differences in degree of inflammation of the mucous surface. It is a fact, then, that urine may be rendered fugitively alkaline, (that is, alkaline by free ammonia,) and also permanently alkaline by the action of the inflamed mucous membrane,

and that one or the other state may be induced according as the membrane pours out more or less alkaline fluid.

The earthy salts of the urine—viz., the phosphates of lime and magnesia—always appear in the form of urinary deposits when the urine becomes alkaline. When the urine deposited the triple phosphate (or phosphate of ammonia and magnesia), Dr. Prout was inclined to consider the case as somewhat different in kind to that in which both the earthy salts appeared—that is, when the phosphate of lime accompanied the triple phosphate. It will be obvious, from what Dr. Rees has said, concerning the fixed alkaline matter contained in the secretion of the mucous membrane, that, if that alkali be poured out only to such degree as to evolve ammonia, and not to neutralise the whole of the acids of the ammoniacal salts of the urine, the triple or ammoniaco-magnesian phosphate must be thrown down as a deposit. If the alkali be effused by the inflamed membrane in still greater quantity, then it is obvious the phosphate of lime must also fail; the mischief in both cases arising from one and the same cause—viz., inflammation of the mucous surface. Now, if we look to Dr. Prout's work, we shall find the history and symptoms detailed under these heads exactly such as we might expect from varying degrees of inflammation of the urinary canals; and it is a matter of surprise that the power of that membrane in rendering the urine alkaline, and its necessary influence in producing the various phosphatic deposits, has been so much overlooked as it has been by systematic writers. When, then, we observe urine of alkaline reaction, we must always ascertain whether or not it affects reddened litmus or tumeric paper permanently. If it do not, and the paper reassume its colour on drying, then ammonia has changed it; and we may conclude, with considerable accuracy, that the mucous membrane is not in so inflamed a state as when a permanent effect is produced. In the one case we shall generally have the triple phosphate only as a deposit; in the other, we shall have the phosphate of lime also. Of course, it is necessary to exclude from consideration that form of alkaline urine which Dr. Rees has before noticed, and which is *secreted* alkaline, and is characteristic of dyspepsia. He is now merely speaking of alkaline urine as produced by the action of the mucous surfaces. There is seldom, however, much difficulty in making the distinction between these two kinds of urine. That characteristic of general disorder, and which is *secreted* alkaline by the kidney, is very rarely accompanied with more than the normal amount of mucus; whereas urine which is made alkaline by the action of the mucous membrane nearly always contains mucus and epithelium far beyond the quantity observed in health, and very often pus also.

The disease characterised by the deposition of the mixed phosphates (that is to say, both the triple phosphate and phosphate of lime) is very accurately described by Dr. Prout. He states that it seldom occurs without severe and old disease of the bladder and prostate, which, we shall observe, is precisely the condition that would favour the discharge of large quantities of fluid from the mucous surface, and so bring about an alkaline urine, such as would permanently affect the test paper.

The author now directs attention to that state of urine which has been described by Dr. Prout as consisting in an excessive excretion of the alkalies. This affection, which that great authority was inclined to consider peculiar in character, was observed by him only in very advanced cases of disease, where the bladder and mucous passages had suffered greatly, or where calculus, or, what he called long-continued phosphatic diathesis, had greatly lowered the patient. From what Dr. Rees has already urged upon our attention, he thinks we shall now be prepared to believe that a very simple explanation may be given of this condition. He has already alluded to two states of the urinary mucous surfaces; in one of them the fixed alkaline fluid was poured out merely in quantity sufficient to liberate a part of the ammonia from the ammoniacal salts; in the second, the fixed alkaline fluid from the mucous membrane overcame the acids entirely, and communicated a permanent alkalinity to the urine when secreted. The first of these conditions was accompanied chiefly by a deposit of the triple phosphate; the second, by both the triple phosphate and the phosphate of lime. Now when long-continued or aggravated disease, such as Dr. Prout has so well described, affects the urinary passages and bladder, and a condition of urine is produced in which ammonia and soda (and, as he states, probably potassa) are found in excess in urine, the cause of the presence of these constituents appears very plainly indicated. Dr. Rees believes, then, that this condition is again produced merely by an inflammation of the urinary mucous surfaces connected with a more excessive discharge of their alkaline secretion; and that it is the constituents of this which, by their presence in such excess, decompose the ammoniacal salts, throw down precipitates of the earthy matters, and, becoming free, produce the form of urine described by Dr. Prout. Dr. Rees in no way believes the disease to be caused by any peculiar state of system.

It will be observed that the author has here extended the importance of the alkaline secretion of the urinary mucous surface to a degree which has not yet been accorded to it. He would wish to state, however, that he has only done so after very mature consideration, and a full persuasion of the very satisfactory manner in which this view explains and simplifies the subject.* The discharge from an inflamed mucous surface, when we have the opportunity of exactly estimating it, we all know to amount to a very large quantity per diem. This discharge is a fertile source of alkali; and there can be no possible reason why the urinary mucous membrane should be exempted from liability to excessive secretion any more than the lining membrane of the bronchi or nares. It is, as he has before said, constantly exposed

* This point was much neglected by Dr. Prout; but Dr. Rees finds that, since he directed attention to it, in his work on 'Analysis and Treatment of Urinary Diseases,' published in 1845, it has been mentioned by others. Dr. Bence Jones, in his work, published in 1850, has made a distinction between those cases of alkaline urine caused by disease of the urinary mucous membrane and those indicative of general disorder. He has also adopted the author's views with regard to the relation of the early phosphates to alkaline urine, stating it as his belief that the phosphatic diathesis is nothing else than the precipitation of the earthy phosphates, in consequence of the alkalescence of the urine.

to the action of a fluid which is varying in its degree of acidity, and which is affected by the character of the ingesta; and there is no occasion that he should explain how or why it is that, in our civilised state, those ingesta are most irregularly supplied to the stomach, both in quantity and quality; or how we too often find the members of our enlightened community paying dearly, through their urinary organs, for those physical as well as intellectual delights which are to be obtained at the dinner-tables of the more elegant and refined of the age. There is, perhaps, no mucous surface more harshly dealt with than that lining the kidneys, ureters, and bladder, and none which has been less reasoned upon by pathologists.

It will be observed, that Dr. Rees has taken especially into consideration the action which the fixed alkali poured out must exercise on the ammoniacal salts of the urine; whereas the production of ammonia in urinary disease has been previously ascribed to the decomposition of urea only. He by no means, however, entirely disregards this last-mentioned source of the alkali: it is well known, indeed, that some portion of urea is always decomposed when brought in contact with fixed alkaline solutions.

The analogy to which Dr. Rees has pointed, in comparing the secretion of the urinary mucous surface under inflammation with the products of other mucous membranes in the same condition, may not at first appear quite satisfactory. It might be very plausibly argued that the condition of membrane under which the greatest amount of secretion was poured out was not necessarily that of highest inflammation; and from what we know with respect to bronchitis it must be acceded that, when the secretion is produced very alkaline, and very fluid, and in very large quantity, we do not always find that inflammation runs highest. It is under this impression that he would rather apply the word irritation, when speaking of these varying amounts of secretion, believing, as he does, that it more correctly expresses the real and immediate condition. Thus, when the system is broken down by old, and long-continued disease, it is then we observe the presence of the fixed alkalis in excess in the urine; or in other words, we have then large quantities of the mucous fluid poured out; and it is this kind of excessive discharge which is produced in the bronchial tubes when the patient shows no great power of system, where irritability exists, and where inflammatory action is marked by that degree of atony which the practitioner recognises in the term "subacute inflammation."

With respect to the treatment of these cases of alkaline urine it must be of a very different kind to that which is applicable to the cure of alkalinity of the urine when caused by stomach derangement. The pathology of the subject must be regarded, and the alkalinity combated by directing treatment to the irritated mucous surfaces. We must remember that the urine is secreted acid, and our object must be to make it less irritating. The acid remedies which are useful, therefore, in that form of alkaline urine dependent on constitutional causes, are here most improper; and we must meet these diseased conditions by the exhibition of alkalis. The urine as it is secreted in the kidney, must be rendered alkaline, and so less irritating;

and while we do this, attention must be paid to the state of the secretions generally, and especially to that of the skin,—a much neglected excretory surface, but which should never be forgotten in considerations connected with urinary pathology.

Dr. Rees is well aware that, in the case of the excretion of alkaline urine such as is here described, high authorities have recommended the use of acid remedies. He entirely differs with this view; he believes it to be inconsistent with sound pathology, and experience has shown him the advantage of the opposite plan of treatment.

With respect to the best means of rendering the urine alkaline and less irritating in this disease, Dr. Rees would recommend the use of salts of vegetable acids; the citrate of soda or potassa, as exhibited in ordinary saline draughts, is an excellent salt for the purpose. This is more especially to be used when it is not desirable to risk purging the patient; when, on the other hand, we find it requisite to produce such effect, the tartrate of potassa may either be substituted, or combined with the citrate.

The vegetable acids are decomposed in the organism, and the base with which they were combined appears in the urine as a carbonate. If the state of the bowels be such as to require purging, there is no better remedy than the ordinary Seidlitz powder of the shops—a combination of soda and potassa with the tartaric acid which rarely fails to induce an alkaline state of the urine, and thus soothe the irritation of the canal. This treatment, if combined with the use of vegetable tonics, will be found sufficient in early cases. Where, however, we have to deal with cases in which there is evidence of old and long-continued disease, we must not trust to this treatment alone. We may here expect that thickened state of the sub-mucous cellular tissue consequent on inflammatory action; and we must have recourse to mild alteratives and sedatives, and remedies such as will assist the skin to assume a more than ordinary action for the relief of the kidneys: Hydrargyrum eum Cretâ and Dover's powder, in small doses taken at night, may be here used with great advantage. Care must be taken, however, to watch the effects of the mercury—to ensure, in fact, its alterative action, and to avoid alike both purging and salivation. In the cases Dr. Prout has characterised by the presence of the alkalis in excess, mercury is nearly always inadmissible; the patient is generally too far debilitated to admit of its exhibition with any degree of safety and support; antacids and sedatives are all we dare venture upon.

In all these conditions a great amount of relief may be obtained by the use of warm bathing, if it be judiciously applied. In advanced cases the debility is generally too great to admit of it, but wherever the strength allows it, the use of warm or tepid baths, and of friction to the skin, are valuable means of relieving the patient.

An excellent method of rendering the urine less acid and irritating in all these forms of disease consists in the administration of the liquor potassæ. This is, indeed, the old established and favorite remedy which experience has approved; Dr. Rees has constantly used it, and in some cases it is an extremely efficacious and convenient form of alkali. Owing, however, to the small quantity of potassa which we may venture to exhibit in the caustic state, the urine is not rendered

alkaline by this remedy so speedily as when the tartrate and citrate of the base are used. Dr. Rees here states a fact which has been brought to light by this mode of treatment, and which places it beyond doubt that the urine is secreted *acid* in these cases of *alkaline* urine. Now if we begin in the early stage to exhibit small doses of liquor potassæ,—say from 15 to 20 minims, three times a day,—we shall occasionally find that, while this *alkali* is being exhibited, the urine which was alkaline will become *acid*.

We are now prepared to understand how this may happen. If we lessen the acidity of the urine as it is secreted on to the mucous surface, and thereby render it less irritating, that surface will in time recover itself, and no longer pour out that fluid, which is the result of inflammation. The urine will after a time pass over it without producing irritation, and the result will be that acid urine is voided, its natural acidity being only partially neutralised by the small dose of liquor potassæ. Dr. Rees conceives this to be the only satisfactory explanation of the fact, so anomalous at a first view, that *alkaline* urine may be rendered acid during the administration of an *alkaline* remedy.

The lecture concludes with some remarks on the production of alkaline urine by the ingestion of vegetable acids.

ART. 30.—*On Chronic Vomiting as symptomatic of Disease of the Kidneys.* By CATHCART LEES, M.D.

(*Dublin Quarterly Journal of Medicine*, Aug. 1851.)

[The author notices that distressing nausea and vomiting may occur totally independent of any disease or even direct irritation in the gastro-intestinal system, being essentially sympathetic or nervous. One variety of this is the vomiting sympathetic of kidney disease, which he proceeds to illustrate. He says:]

If the vomiting be symptomatic of a calculus in the kidney or ureter, the diagnosis is seldom very difficult, as the situation of pain in the region of the organ, its suddenness and violence, coincident with severe vomiting, generally guide us to the seat of the disease. But in those cases in which the vomiting is caused by disease in the kidneys, without any calculus, or if there be a calculus, yet so situated as not to cause pain or tumour, there is often great difficulty in the diagnosis; an accurate knowledge of the patient's history being requisite, as also a careful inquiry into his present symptoms, and a minute investigation into the state of the urinary secretion, before we can venture on a positive diagnosis.

[The author here refers to a case in which vomiting was a permanent symptom, some being instances of otherwise unsuspected calculus of the kidney, and one, which is given at length, of fatty degeneration of the organ. He then continues:]

Nausea and vomiting are very constant occurrences towards the latter periods of chronic degeneration of the kidneys; but as they are not met with in most cases of irritation of the organ, no matter from what cause, whether it be simple acute nephritis, the mechanical irritation of a calculus, or gradual obstruction of the tubes from fat,

we cannot establish any positive diagnosis from its occurrence. As to any degree of certainty with regard even to the seat of the disease, derivable from peculiarities in the times of vomiting or nature of the matters vomited, I am not prepared to speak positively. In two cases, the patient always vomited early in the morning, previously to getting up or taking food. I at one time thought this might be a means of diagnosing vomiting from disease of the kidney from other forms of vomiting, but further experience has satisfied me that this rule does not hold good. We must, therefore, take into consideration all the other circumstances of the case, the history, age, sex, and particularly the situation to which the pain is referred. But even with the most careful examination we shall often be puzzled, particularly in cases when we suspect the brain to be the cause of the vomiting; and yet when the pulse does not afford sufficient indications, nor have we any other symptoms referable to it.

[Of the treatment of chronic vomiting the author thus remarks:]

If it occur in the early morning while the patient is fasting, I have found the most successful plan to be, to make the patient take some light food before getting up, remaining quiet for a short time afterwards. If it occur at an early period of the disease, and particularly if pain in the loins is complained of, three or four ounces of blood taken by cupping from that region affords great relief. I have seen in some cases most satisfactory results from the use of equal parts of boiled milk and lime water given frequently during the day. In other cases two or three drops of hydrocyanic acid, combined with three grains of bicarbonate of soda, given immediately before food, proved useful. Creasote in doses of one or two drops is also occasionally of service. Some practitioners have recommended the use of opium; but I have not used it, in consequence of the tendency to head symptoms which exists in all cases where the structure of the kidneys is deranged; and, as in many cases, it is difficult to decide whether the symptoms are caused by mere mechanical irritation, or obstruction of the kidney itself, or whether they depend on general poisoning of the system from retention and circulation of urea and other excrementitious substances, which ought to pass out of the body with the urine.

ART. 31.—*Treatment of Albuminuria.* By Dr. OSBORNE.

(*Dublin Quarterly Journal*, Aug. 1851.)

The following remarks are an abstract of the concluding portion of an essay on albuminous urine, a general analysis of which will be found in our Report, § *Diseases of the Genito Urinary System*.

Dr. Osborne states that he has never failed to remove the dropsical swellings in anarsarca, accompanied with albuminous urine, when the healthy action of the skin is restored. The means of opening the skin are various, but in many cases they will all fail. General baths are, he thinks, rarely suitable on account of the deficient action of the skin and capillaries. The diaphoretic which he has generally used has been half a drachm of Ammoniated Tincture of Guaiacum; five grains

of Sulphuret of Potassium; and half an ounce of Liquor Ammonia Acetatis, taken at bedtime, followed by a pint of hot whey. In acute cases he recommends local bleeding or counter-irritants to the loins. Mercury he believes cannot well be dispensed with in acute cases, but its exhibition requires caution.

Dr. Osborne also calls to mind that alkalescence is a necessary condition of the blood, and that the free alkali is soda, that when the soda fails, either from deficient supply, or want of power to compose the muriate of soda in the stomach, the result will be coagulation of the blood in the capillary vessels, and the phenomena of inflammation in those parts when such coagulation takes place; and that potash and soda taken into the stomach, either uncombined or as carbonates, have the power of rendering the urine alkaline, and of dissolving fibrine. On these grounds he reasons, that when in any disease, the kidneys contain fibrinous deposits within their vessels, the administration of alkalies should be efficacious. The combination which he uses is liquor potassæ and carbonate of soda, each two drachms in eight ounces of decoction of Carrageen moss. The dose is a table-spoonful every two hours taken in milk. When anæmia is very pronounced he adds the tartrate of iron.

In reference to the use of purgatives the author says:—"The use of purgatives may be easily overlooked in our anxiety to strike at the root of the disease; but their value can hardly be over-estimated, and is indeed limited by the tendency to gastritis and enteritis which so generally prevails. If it be true that the stomach and bowels have the faculty of eliminating urea, the tendency now mentioned must be viewed as an effort of nature to relieve herself, when the proper emunctories fail to do so. Certain it is that a powerful purgative, such as elaterium, given at due intervals, tells more on the swellings, and exhausts the strength less, than the plan of daily purging."

In conclusion, the author speaks of the occasional advantage of emetics and of gallic acid.

SECT. VI.—DISEASES OF THE SKIN AND CELLULAR TISSUE.

ART. 32.—*On the Pathology of Lepra and other Scaly Diseases of the Skin.* By R. B. TODD, M.D.

(*Medical Gazette*, May 16, 1851.)

[The views of the author on the pathology of the squamous diseases are thus expressed:]

In discussing this subject, the problem we have to solve is this—what can give rise to these remarkable patches on the skin? why do they assume their peculiar form and other characters? and why do they prefer particular situations of the body?

Now we gain an important clue to the decision of this question by

our knowledge of the clinical history of syphilitic lepra. That knowledge amounts to this: by the contact of a certain diseased secretion a primary sore is generated; this is followed by more or less of febrile disturbance, sore throat, articular and periosteal affections, and a peculiar eruption of the skin. It may be taken as quite certain that the cause of all these morbid phenomena is to be found in the introduction into the system of a particular poison. That poison need not be introduced into the system through a mucous membrane; if it be brought in contact with an open surface on the skin, this is quite sufficient to procure its introduction into the system. In this way medical men sometimes become infected, as in a case which lately came before me:—A highly respectable practitioner attended in her labour a woman in whom it never occurred to him to suspect any syphilitic disease. It so happened that at the time he had an abraded surface on one of his fingers. An obstinate ulcer formed here, and secondary symptoms ensued, extending even to disease of the bones. He was at first quite at a loss to explain the cause of his symptoms, when the woman whom he attended applied to him to be cured of secondary symptoms, having an eruption exactly similar to his own; he at once saw the source of his affection.

It is through the blood that such a poison must be introduced; there is no other channel through which it can be so conveyed through the system and to such various parts.

We learn, then, that a particular poison generated in the body of another may, by its introduction into the blood, create an eruption on the skin which presents characters very much resembling those of common lepra; and the person in whom the poison is first generated may poison several others, giving rise to the same morbid phenomena in each.

Thus a particular modification of the syphilitic poison may produce, by its introduction into the blood, a leprous eruption on the skin. So, also, other poisonous matters will cause cutaneous eruptions; iodide of potassium will cause an eruption of urticaria or of herpes, or even an eruption of somewhat of the scaly character; mercury will cause a particular form of eczema. The poison of the exanthemata generate each its peculiar form of eruption; and the typhoid poison also occasions a very characteristic rash on the skin.

Surely, then, nothing can be more reasonable than to assume that the eruption of lepra vulgaris, so similar to the syphilitic form and affecting similar parts, is due to an analogous cause—namely, to the presence in the blood of a poisonous agent. But the questions arise, how and where is this generated? can it be isolated? can it be communicated from one to another?

To the first question we may answer, that it is generated in the primary and multiplied in the secondary assimilating processes. But as to what gives rise to its generation we can form no definite idea: why it should be generated in one who is fed well and had plenty of work; and why it should also be generated in another who wanted work, and fared wretchedly, are not to be so easily explained. This, however, must not be forgotten as bearing upon these questions,—that an excess of food, or a supply of a kind of food

which is not readily digested by the stomach of the patient in question, may derange the assimilating processes just as much as an insufficient supply of poor food.

To the second question we must answer, that the poison of lepra cannot be isolated, no more than we can isolate the syphilitic poison. But, in reply to the third question, it may be affirmed that, although the lepra vulgaris is not communicable from one to another, as syphilis is, yet, in another sense, it may be propagated from one to another ; I mean, that, while it is not contagious, it may be propagated by hereditary descent.

And this latter fact, which I suppose the clinical history of lepra establishes to the satisfaction of even the most scrupulous, is favorable to the view of its pathology which I am endeavouring to advocate. For most—if not all—diseases which seem to arise from a *materies morbi* in the blood, are apt to be propagated by hereditary descent.

Another feature of these scaly diseases which favours this humoral view of their pathology is the disposition which the eruptions manifest to affect the skin symmetrically. Many diseases referable to a *materies morbi* exhibit this tendency to symmetry ; as has been shown by Dr. William Budd, in a most valuable paper in the ‘Med. Chir. Transactions,’ in which he discusses with great ability the pathology of lepra and psoriasis.

To conclude, then, this part of my subject, which time forbids me to treat of at greater length, I would sum up thus : that as the syphilitic lepra is due to the introduction into the blood of a poison generated in the body of another as the result of impure and promiscuous sexual intercourse, so the lepra vulgaris is produced by a poison generated in the body of the patient—an effect of some disturbance of the primary and secondary assimilating processes ; or of which the germs, as it were, were transmitted from either parent, and were multiplied in the secondary assimilating processes of the patient.

ART. 33.—*Galium Aparine in Lepra.* By Dr. WINN, Truro.

[Dr Winn writes as follows to the ‘Medical Gazette:’]

“A gentleman, an acquaintance of mine who had suffered for many years from lepra vulgaris, for which he had taken all the usual remedies without obtaining the slightest relief, informed me not long since, that he had at length found a remedy for his disease. He told me that it was a wild plant of which he did not know the name, but that he would show me the spot where it grew. On examining the plant, I discovered it to be the *Galium Aparine*, which grows so abundantly on the hedges in this country, and is commonly known by the name of cleavers or goose-grass. At the time I saw him he was taking a strong decoction of the plant, and under its use the rash was disappearing rapidly.

“On making inquiries, I find that three other parties have been cured of similar diseases by the same remedy. One of the parties had been discharged from St. George’s and also from the Middlesex Hospitals about twenty years since, as an incurable patient. The remedy was

introduced here about twenty years since by some German itinerant quack.

"I have not as yet had much experience in the use of this remedy. It appears to act as a mild diuretic, and may be given in large quantities, as it does not produce any injurious effect on the system. I use a decoction made by boiling a large handful of the plant in a quart of water for about twenty minutes. Of this decoction I give three parts daily."

Medical Gazette, Oct. 4.

ART. 34.—*Treatment of Eczema Impetiginodes.*

By JAMES BEGBIE, M.D.

(*Lancet*, April 12, 1851.)

[Dr. Begbie observes that the success he has witnessed in the treatment of several intractable disorders of the skin in the Hospital of St. Louis and chiefly in the service of M. Devergié, leads him to offer the few following observations, in the hope of directing attention to the employment of certain remedies, admirably adapted to the treatment of such cases.]

1. *Eczema Impétigineux : its Treatment.*—The association of eczema and impetigo gives rise to a very common and to a very obstinate form of disease. This complex disorder represents, in its earliest appearance, the characteristic features of the primitive eruptions of which it is composed—a greater or less number of pustules, such as those which occur in impetigo vulgaris, being mingled with the vesicles of eczema. At that, the early stage of the disease, the differential diagnosis between the compound eruption and either of those primitive forms of which it is composed, is easy. At a later period we possess another distinguishing feature in the formation of dense crusts after the rupture of the pustules, showing that the exudation which had originally taken place was more than pure serum—the characteristic of simple eczema. This is the affection which Bateman makes his second head of eczema, and calls E. impetiginodes. All, I apprehend, will be ready to acknowledge the frequent and great difficulty experienced in effecting a cure in this affection, which too often merits the appellation of inveterate. The plan of treatment I have seen adopted by M. Devergié in the treatment of this disease is not less simple than efficacious: it consists in the application to the affected part of the oil of cade. This oil of cade is a pyrogenic oil, prepared by the distillation of the trunk and larger branches of the old juniper. The oil itself has rather a pleasant pungent odour, a dark-brown colour, and somewhat thick consistence. M. Devergié thus employs it: he paints it over the diseased skin with a brush, and then, with a dry, but soft brush, rubs it in. Its application he repeats every three or four days, but not every day, as some recommend. The latter M. Devergié regards as a bad practice sufficient to account for failures in cure by the oil. This constitutes in most cases the entire treatment; for while, in all cases, the regulation of the bowels and the employment of a light and non-stimulating diet are enjoined, in few is any internal

remedy of importance administered. The oil of cade is much used in Paris as an external medication in skin diseases, chiefly in vesicular and papular eruptions; the case of eczema impétigineux, however, M. Devergié regards as the one, *par excellence*, for its employment. The measure of success I have seen to follow cases so treated, certainly entitles the remedy to the high character M. Devergié has assigned it. I have seen a large number of cases so treated; the employment of the remedy, in most, has extended over a period of weeks, but in all, without exception, the results obtained have been most satisfactory. Lately a cure was effected by the employment of the oil of cade in a case of eczema impétigineux, in which the crusts assumed the nummular form; hence called by M. Devergié, *E. I. nummularis*—a form of the disease hitherto undescribed by authors, and most difficult to cure. I have noticed, in regard to the action of the oil in the case of eczema impétigineux, that it is the pustular development which is first arrested and overcome, in many instances, the case being reduced from a complex eruption of pustules and vesicles to a simply vesicular one, before a cure took place. This would tend to prove, that in simple impetigo and in ecthyma the oil of cade may prove a useful remedy; in these cases I have not as yet had proof of its efficiency.

ART. 35.—*Icthyosis successfully Treated by Cod-liver Oil.*

By DR. BANKS, Dublin.

(*Dublin Quarterly Journal*, Aug. 1851.)

[The author's case is as follows:]

Jane Armstrong, æt. 13, was admitted into the Whitworth Hospital in March, 1851. She is said to have had a rough skin from infancy. She appears half starved, and has not attained the size of a child of ten years old. The skin is exceedingly rough, but the lower extremities, with the exception of the inner part of the thighs, present the ordinary appearance of ichthyosis. She never remembers to have perspired. Immediately on admission the child was placed on the following treatment:—she was ordered a generous diet, and was to take a dessert-spoonful of cod-liver oil three times a day; she had a vapour bath every night, and on coming out of the bath, the whole body was rubbed with cod-liver oil, a flannel dress to be kept constantly next the skin. This plan of treatment was sedulously persisted in for three months, with the result of the gradual removal of the disease, and the most extraordinary improvement in the general appearance of the patient.

ART. 36.—*Erysipelas: Treatment of by Muriated Tincture of Iron.*

By HAMILTON BELL, Esq., F.R.C.S.E.

(*Edinburgh Monthly Journal*, June 1851.)

The author's intention being solely practical, he does not enter minutely into the pathology of erysipelas; but in order to explain, in some measure, the principle by which he was actuated, in employing a

powerful tonic in a disease accompanied with so much fever and excitement, he records his opinion, that in inflammation, the capillary vessels having apparently lost the power of separating or electing the component parts of the blood which are necessary for functional purposes, and become, to a certain extent, inert tubes, a stream of blood is admitted for the circulation of which they are not calculated.

The treatment which he has adopted for many years, without failure in a single case, is the exhibition of the muriated tincture of iron. The first object is to have the bowels freely acted upon. If the disease be mild, 15 drops are given every two hours; if more severe, 25 to 30 drops, persevered in night and day, whatever be the degree of fever or delirium. His only local applications are flour or cotton-wadding. Cases are appended in illustration.

The brother of the author, Dr. C. Bell, confirms the favorable report above given. He says he has given it in the idiopathic form, and in that consequent on injury, with equally good results, and he has found it useful at all ages, from infancy to advanced age.

So beneficial is this treatment in erysipelas, that Dr. C. Bell expresses his conviction that if boldly given in puerperal fever, many lives would be saved.

ART. 37.—*Treatment of Lupus in the Parisian Hospitals.*

By JAMES BEGBIE, M.D.

(*Lancet*, May 3, 1851.)

Dr. Begbie notices that the most successful treatment of this frequently intractable disease, will be found in a happy combination of constitutional with local remedies. M. Devergié, whose practice he publishes, divides lupus into two forms, *lupus exedens* and *lupus non exedens*. It is of the former the author now speaks. This, the *lupus exedens*, may be further distinguished as *tubercular* and *non-tubercular*, the chief differences between these two being, that the tubercular form is deep in its ulcerations, rapid in its progress, hitherto little amenable to treatment, and has its seat almost without exception on the face. The non-tubercular is a true *lupus exedens*, yet is less rapid in its progress than the tubercular, less deep also in its ulcerations, gaining extent more by the surface of the skin than by corroding deeper textures, is more amenable to treatment, and almost invariably has its seat upon the trunk; usually the back or shoulders are the parts affected by it. It has been seen but very rarely on the face. It is in the constitutional treatment of lupus that M. Devergié places most confidence, and the remedy which is most successful in his hands is the cod-liver oil. Many authors have spoken of a connection subsisting between lupus and phthisis, and it appears at least to be true, that frequently patients suffering from lupus are carried off by tubercular deposit in the lungs and abdomen. The interest of this connection will be increased if its existence may not be considered as having received a further proof, when the fact is established, that as in phthisis, so in lupus, the best, if not the only remedy, is cod-liver oil. The oil is sometimes prescribed after the English fashion, in dessert-spoonfuls

three times a day; more generally the doses are smaller, and repeated at lesser intervals. In all the cases treated in this way, the oil has been prescribed immediately after the patient's entrance into hospital; in most, its continuance for a few days has been sufficient to produce a favorable change in the appearance of the disease, while in almost all its persistent use for a period of weeks has resulted in cicatrizations of the part affected, and in a greatly improved condition of the general health. Some cases resist this treatment, and that after a very fair trial of the oil; but in all these, it is worthy of note that the constitution was thoroughly impregnated with the syphilitic taint.

In cases of this kind M. Devergié adopts a mixed treatment, and in two such, the exhibition of mercury in small doses along with the oil was followed by the best results. Iodine in its various forms, and arsenic in its scarcely less numerous, is also employed in the treatment of lupus, but with results greatly inferior to those obtained by the cod-liver oil. In respect to local applications the proper period for having recourse to them is when constitutional treatment has failed to produce a perfect cure. The epispastics generally employed by M. Devergié is the chloride of zinc made into a paste with a little flour and water. After its application, which should be confined as nearly as possible to the part affected, the paste soon becomes solid and hard, it remains attached in general for about five days, after that it separates, and if its remedial powers have been properly exercised, a cicatrix is disclosed which remains permanent; if, instead of a cicatrix, fresh tubercles are found making their appearance, the paste must be again employed. It is comparatively seldom that two, and very rarely that more than two, applications of the epispastic are required. M. Devergié regards it as very favorable for a patient affected with lupus, to suffer a slight erysipelas, and the good effects of epispastics he considers to be due in a considerable measure to the occurrence of an erysipelatous inflammation in the diseased part.

Dr. Begbie's object in this communication is to direct attention to the efficiency of cod-liver oil in the treatment of lupus exedens. In the excellent work on diseases of the skin by the late Dr. Thomson, and edited by Dr. Parkes, mention is made of the employment of cod-liver oil in lupus, but not of the measure of success which followed its exhibition. The author's observations in Saint Louis allow him to speak most strongly on this point; and as embodying his experience in few words he gives the following conclusions:—

1. That the constitutional treatment of lupus by cod-liver oil is eminently useful and successful.
2. That when the constitution of the patient suffering from lupus is strongly affected with the syphilitic taint, a method of treatment such as that already adverted to in this communication will probably be found more successful than the exhibition of the oil alone.
3. That epispastics should only be employed when constitutional means have failed to produce a perfect cicatrix. Probably the best epispastic is the chloride of zinc.

ART. 38.—*Economic Formula for the treatment of Scabies.*

M. Courbassier gives the following recipe for a lotion, suitable to the wants of the most indigent itch patients. It consists of a mixture of soot, salt, and sulphur, in the proportion of four teaspoonfuls of the former to one each of the two latter; of this mixture, one teaspoonful mixed in a sufficient quantity of olive oil, is rubbed into the entire skin every night for seven times; it is then washed off. The author admits that this prescription is only suitable for the dirtiest of itch patients, to whom a little more or less of filth is of no moment.

Gazette Médicale, 19 Juillet.

ART. 39.—*On a peculiar condition of the Integuments connected with Anasarca of the Legs.* By MR. NUNN.

(Reported in *Medical Gazette*, April 4, 1851.)

[The remarkable state of integuments alluded to is thus described by Mr. Nunn; for the accuracy of the portrait we can vouch, having an example of the disease at this moment under our care in the Norfolk and Norwich Hospital.]

In certain cases of dropsy, and especially in those dependent upon chronic heart-disease, towards the closing stage of that malady, when the legs have become infiltrated with fluid, and when the distension of the skin has arrived at a pitch which seems to threaten its vitality, it will be found that the cuticle gradually cracks, and that an exudation of serum takes place. The skin does not retain the waxy whiteness characteristic of anasarca, but changes to a reddish hue, or the cuticle separates from the true skin, and serum is poured forth more or less freely. The surface next becomes uneven, and, in the course of time, within a few weeks, the whole leg, from the ankle to the knee, is studded with elevations, varying from the size of a pin's head to that of a pea, which in some parts are grouped together, so as to cause larger protuberances. They are moist and shining; around their bases is a whitish pasty secretion, and serum oozes from their surface. A brownish green staining encircles the limb above the tuberculated part in some cases. This state is a result of anasarca, widely different from the ulceration following the formation of bullæ, or the large open sores produced by the separation of sloughs. It is a change, however, not of frequent occurrence, and has been mistaken for elephantiasis. It is attended with a great deal of pain and smarting. When the tuberculation of the skin is fully established, a profuse discharge of serum takes place, saturating the bandages. The fluid secreted has a peculiar faint sickly odour. It amounts to many ounces in the twenty-four hours. In proportion to the extent of the tuberculation and the amount of the discharge is the relief experienced from the oppression of the vital functions, particularly of the respiration. The beneficial change is most striking; the fluttering pulse, the furred tongue, hot, dry skin, parched lips, leaden countenance, and the laboured respiratory movements, disappear: the size of the body diminishes, the

brain again becomes active, the aspect brightens, and the most sanguine hopes of ultimate recovery spring into existence. When, from any cause, the discharge of the fluid is suppressed, even for a few hours only, it is followed by cerebral disturbance and congestion, and by uneasiness about the cardiac region. From this Mr. Nunn infers that the actual disease causing dropsy is not sufficient to induce death; but that the secondary effects of the effusion upon the vital functions is the more direful of the two agents, and therefore that, if the fluid can find an exit, the patient may exist in greater or less comparative security. But, unfortunately, this effort of nature has a tendency not to be permanent. In the course of time the mammillations shrink, the exudation becomes scanty, and at last entirely ceases, the leg being covered with a dryish scurf. In one instance, the patient survived this last change for more than a year. The preceding statements were illustrated by the detail of several cases which fell under Mr. Nunn's observation, or to which he was called by professional friends, and he then commented on the mechanism of the phenomena, first considering the nature of the discharge, and secondly that of the structural change which take place in the skin itself. The fluid does not differ from ordinary dropsical fluid; it consists of water and albumen, with a certain proportion of the salts of the blood. No traces of urea could be found in it. Only one specimen, however, had been analysed, and Mr. Nunn, therefore, would be cautious in coming to a conclusion respecting its nature, as it is a point involving the important question of vicarious secretions. Mr. Simon's opinion is, that one organ can vicariously secrete for another only such materials as are common to both; if this be correct, then the presence of urea in the discharge cannot be expected. The relief afforded by the free discharge, Mr. Nunn, therefore, is inclined to attribute to the liberation of the parenchymatous organs from their load of serum, and their being thus enabled to perform their allotted functions. To illustrate the saturation of these organs, he mentioned that a kidney belonging to a person deceased from cardiac dropsy, was of double its usual weight, namely, eight ounces. With respect to the second question, Mr. Nunn was of opinion that the mammillations and tubercles were hypertrophied papillæ of the skin; and he further thought it possible that some noxious matters might be eliminated from the system with the serum. The next question to be considered was, how to favour the development of these secretory mammillæ, and to keep them in a sufficiently active condition. The first, he thought, would be effected by remedies which would soften the epidermis, and stimulate the circulation of the skin, without causing mischief, and both these objects he believed would be obtained by warm fomentations. The ordinary dressing should be a soft linen rag, slightly smeared with unguetacei.

PART II.—SURGERY.

SECT. I.—SYMPTOMATOLOGY AND DIAGNOSIS OF SURGICAL DISEASES.

ART. 40.—*On the Microscope and the Exploring Needle as a means of Diagnosis in Surgery.* By Prof. SYME.

(*Edinburgh Monthly Journal*, Jan. 1851.)

[Mr. Syme puts but little faith in the above instruments as auxiliaries in Surgical Diagnosis, and warns his class not to trust to them. In an introductory clinical lecture, he says in allusion to the subject:]

And here, gentlemen, I must beg to warn you against placing confidence in the use of certain means which have been proposed as assistants to diagnosis, but are too frequently employed as substitutes for the careful investigations most conducive to the attainment of this object. I allude more especially to the exploring needle and microscope, which are at present much in fashion for facilitating the recognition of morbid growths and deposits. It may seem, at first sight, that, with exception of the risk of exciting diseased action, which must always attend the thrusting of a foreign body through the living textures, no harm, at all events, can accrue from the information obtained in this way; but when the subject is more fully considered, I trust it will appear to you in a different view. For, in the first place, it must be admitted, that reliance upon such assistance encourages a lax and imperfect exercise of the other means which we possess for discovering the truth; and, secondly, it cannot be denied that reliance may be placed with much more safety upon the latter than upon the former alone.

It is upon such grounds that I have always had a great distrust of the exploring needle. But the microscope seems to me still more apt to mislead; and I am glad to take this opportunity of protesting against the importance which at present is most unduly attributed to it, as a means of distinguishing morbid growths. After making this statement, it would be useless to quote any experience of my own upon the subject, as the results would be attributed to prejudice or want of practice; and I will, therefore, select from the numerous mistakes that crowd into my memory, one that lately happened to a surgeon who has written strongly in favour of microscopical examination, who occupies a prominent place in his profession, and who was led to investigate the particular case concerned with peculiar care. The patient suffered from a tumour, which threatened to prove fatal, and of which a small portion being subjected to the microscope, appeared to present the characters of a malignant deposition. Biassed no doubt by this impression, the surgeon finally resolved that the

case did not admit of remedy. The patient then applied to me, when, paying no regard to the microscopical texture of the tumour, I carefully considered its situation, connections, and history,—with the conclusion, that it was not connected with any unhealthy condition of the system, and that it might therefore be removed with every prospect of permanent relief. Acting under this persuasion, I performed the operation which was requisite, with the most satisfactory result. In short, gentlemen, I would say that the assistance which exploring needles and microscopes afford in the practice of surgery, may be compared to that which a lame man derives from the use of crutches. If he cannot walk without their support, he must of course avail himself of it; but need never expect to walk so well as one who is independent of such artificial aid. It is far from my intention to deny that the microscope may be of service in promoting the minute researches of anatomy, physiology, and pathology. But I maintain that it can never supply the want of that knowledge of obvious structure and sensible action in health as well as disease, which is essential for the discrimination of morbid textures with a view to their remedy.

ART. 41.—*On Hysterical Affections of the Hip-joint.*

By MR. COULSON.

(*London Journal of Medicine*, July 1851.)

Mr. Coulson gives the following diagnostic signs of nervous, as contradistinguished from organic, disease of the hip-joint:—

In the nervous affection pain is felt from the commencement in the hip, and extends to the loins and down the thigh. There is great nervous excitability and extreme sensitiveness in the part; and the patient from the first, is unable to walk. Combined with this extreme suffering, the trochanter major retains its proper bearing to the spine of the ilium. There is not the characteristic wasting of the glutæi muscles, and consequently no flattened appearance of the nates. Pressure in these situations, when the bone approaches the surface does not excite greater pain than elsewhere. There are no involuntary startings during sleep. On the contrary, the patient sleeps calmly through the night. In true hip disease the reverse is the case, the sleep, if unaided by opium, is broken by sudden shooting pains and frightful dreams, or vague anticipations of coming pain.

Of the pathology of the disease Mr. Coulson admits that little is known. The joint is healthy in structure. He asks whether the spine is not in a morbidly excited state, and responds truly, or whether the brain is not itself perverted as to its functions, and the pain is not a delusion? His own opinion inclines the other way, and he looks to the sensorium as the organ chiefly affected.

With regard to the treatment, he remarks, that if it be mistaken for organic disease, the line of practice adopted on that supposition will be positively injurious. The patient must be persuaded to leave her couch, and to take air. The diet must be plain and nutritious. Among medicines, he prefers the vegetable tonics and antispasmodics—

as valerian. Copland has found most benefit from turpentine internally by enema, but he also associates various tonics and local sedatives.

ART. 42.—*On the Position of the limb in Diseases of the Hip-joint.*

By HOLMES COOTE, Esq., M.R.C.S.

(*Medical Times*, May 17, 1851.)

Mr. Holmes Coote makes the following observations on the difficulties attending the diagnosis of this affection:—There are but few surgeons who have not experienced occasional difficulty in forming an accurate opinion as to the character of the morbid changes which occur during life in chronic disease of the hip-joint. In the early stages there is frequently but little pain, and children so affected, especially amongst the poorer classes, are permitted to walk about and pursue their daily avocations, without notice being taken of their lameness, until at last a fall or some other accident excites more acute symptoms, and induces the parent to seek professional assistance. The surgeon finds the pelvis oblique; the affected limb apparently elongated, and slightly everted; he finds that in bending the thigh upon the trunk, the whole pelvis moves with the femur; pressure over the hip-joint excites, perhaps, little pain; there is flattening of the buttock, and the trochanter major appears more sunken than natural. The history accompanying such a case is often as follows:—The child was in perfect health, and able to run about until about a week or two ago, when, in consequence of an accident, it was thrown down upon the side. Upon being taken up, it was found to be lame and has been unable to walk ever since. The history of the case, and the position of the limb, might lead to the belief that the head of the bone was dislocated upon the thyroid foramen, especially amongst those who consider that inversion and not eversion of the foot, is the position assumed by the inferior extremity in the earlier stages of hip-disease. I propose offering a few remarks upon the position of the limb, granting that, as is commonly asserted, there may be inversion and not eversion; that there may exist a resemblance to dislocation on the dorsum ilii, or to dislocation on the thyroid foramen; but denying that such varieties can ever be referred to accident.

In the commencement of an inflammatory affection of the hip-joint, the thigh is bent upon the body; the whole limb is slightly everted and abducted; the anterior superior spinous process of the ileum of the affected side is either raised, when the limb appears to be shortened, and the sound hip more sunken than the opposite, or it is depressed or thrown forwards, when the whole limb appears elongated, the knee being bent, and the toes touching the ground a short distance in front of the toes of the sound limb.

The elevation or the depression of the anterior superior spinous process of the ilium of the affected side depends upon whether the patient happens to have been forced to follow his occupation during the early stages of the disease, or whether he has been in circumstances which allowed him to rest when in pain or uneasiness. The spine of

the ilium is generally sunk and thrown forwards, and the limb apparently elongated; that position being the one in which the diseased joint will be easiest, the patient standing upright. But if he be forced to walk about, the pelvis becomes oblique in the opposite direction, the spine of the ilium is raised, and the limb is apparently shortened. The patient, throwing as much as possible of the weight of the body upon the sound side, limps upon the extremities of the toes of the affected limb, the foot being extended that its tip may just touch the ground.

The flexion, eversion, and abduction of the limb constitute the position into which it would be naturally thrown by the combined action of the powerful muscles which surround the hip-joint. The synovial membrane is inflamed and tender, and unfit to bear pressure; the patient, therefore, indistinctively endeavours to relax every muscle directly in contact with the joint. The psoas and iliacus, passing over the front of the synovial membrane and tightly pressing upon it where the limb is extended, flex and evert the thigh, the gluteus minimus will contribute to flex it; the pyriformis will abduct the limb; the gemelli and the two obturators, especially the obturator externus, will evert the limb; it is unscientific to refer the position of the limb to effusion of fluid into the synovial membrane; it is but rarely that we find the joint so distended, especially at the commencement of the disease, when eversion is the common symptom. It may be true, that if the joint be tightly distended by the artificial injection of fluid after death, the limb will assume the position above described. The attachments of the capsular ligament are in harmony with the sphere of action of the muscles which surround the joint. That the muscles which evert the limb may act with greater freedom, the fibrous capsule is unconnected with the posterior part of the neck of the femur; it forms there a ring not very unlike that which surrounds the head of the radius in the forearm. After a sudden fall, or a blow on the hip, the limb becomes at once everted, if the joint is bruised, long before sufficient time has passed for the capsule to become distended by fluid.

In course of time, as has been proved by innumerable *post-mortem* examinations, the disease produces thickening of the synovial membrane, absorption of the articular cartilage, and ulceration both of the head of the femur and of the acetabulum; the shortened neck of the femur slipping upwards and backwards in the enlarged acetabulum, approximates the fixed points of insertion of all those muscles which have everted the limb. They waste and become atrophied, being no longer in action, and the buttock appears much flatter than on the sound side. The gluteus medius and the adductor muscles then influence the position of the limb, their power being increased by the absorption of the neck of the femur. We may therefore say that, in the second stage of the disease, the limb passes from abduction to adduction; from eversion to inversion. Still flexed it is drawn across the sound thigh, the toe pointing downwards, when the position somewhat resembles that of a limb in dislocation upon the dorsum ilii.

ART. 43.—*On Pus in the Urine: its diagnostic value in Disease of the Genito-Urinary System.* By J. HAMILTON, Esq., Surgeon to the Richmond Hospital, Dublin.

(*Dublin Quarterly Journal*, May 1851.)

The author observes that pus may appear in the urine under difficult aspects:

1st, as an uniform deposit of a pale-white colour subsiding after micturition, but capable of being diffused by agitation. This is pure pus in acid urine.

2dly, mixed with mucus in acid urine, presenting an uniform tenacious yellowish-white deposit, showing irregular pus dics under the microscope.

3dly, after being acted upon by the ammonia of decomposed urine, it appears as a thick, ropy mucus, with some transparency beneath, and exhibiting a superstratum of yellow opaque pus.

Pure pus may get into the bladder from the bursting of a neighbouring abscess, as in the broad ligament in females, or the prostate gland in men; of these the author gives examples.

When pus is mixed with the urine from inflammation of the vesical mucous membrane, a very essential difference is observed. In these cases the urine enters the bladder acid, and becomes mixed with the purulent and mucous secretions of the inflamed membrane. If these are not very abundant the urine remains acid, and is passed so, but on standing soon becomes decomposed, and ammonia is generated, which acts on the pus and converts it into a thick, ropy mucus. It also combines with the phosphate of magnesia in the urine, and forms the triple phosphate, which either floats on the surface as an iridescent pellicle, or is fixed as prismatic chrystals in the mucus deposit.

If, as in paraplegia from injured or diseased spine, the urine is long retained in the bladder, it undergoes certain changes, the deposit takes place in the bladder itself, and the decomposition of the urine next the deposit commences, while the superstratum remains acid. But when the inflammation becomes more intense, and the morbid secretions very abundant, the whole of the urine will become alkaline in the bladder.

ART. 44.—*Spontaneous Luxation of the Shoulder-Joint.*
By M. HANNON.

(*Presse Médicale Belge and Archives Générales*, Juillet 1851.)

Spontaneous dislocation of the hip-joint, as a consequence of disease, is a familiar occurrence to surgeons, but it is very rare to meet with a similar lesion in the joint of the shoulder. The following interesting example is recorded by M. Hannon, in which the humerus was displaced during the course of an attack of acute arthritis:—

A man, æt. 45, of robust constitution, became the subject of rheumatic inflammation of the shoulder-joint. The pain was acute, the tongue furred, skin hot and perspiring; and, in fact, he had all the symptoms of rheumatic arthritis in its most acute form. The swelling

of the shoulder appeared on the second day, and continued to increase until the sixth day, when the patient suddenly felt a sudden tearing pain, which was the indication of the head of the humerus having left its situation. When examined next day the elbow was separated from the trunk, the arm turned outwards, the fore-arm flexed, and held by the other hand; the shoulder was flattened. Passing the fingers under the acromion, a cavity was at once perceived, and the head of the bone was found in the axilla.

The dislocation was reduced, and the bone maintained in its place by proper bandaging, and from this time there was considerable relief to the pain, as well as subsidence of the tumefaction of the joint. A few days after a second partial dislocation occurred, but this was again reduced, after which the patient made a good recovery.

SECT. II.—NATURE AND CAUSES OF SURGICAL DISEASES.

ART. 45.—*On Epithelial Cancer.* By G. MURRAY HUMPHRY, Esq., Surgeon to Addenbrooke's Hospital.

(*Provincial Medical and Surgical Journal*, Sept. 3, 1851.)

[We extract the subjoined remarks from a Course of Lectures delivered in the Medical School of Cambridge, and to which we have before been indebted for contributions. The author divides cancer into four varieties:—1. Epithelial cancer. 2. Schirrous and encephaloid. 3. Melanic cancer. 4. Alveolar or gelatiniform cancer. The first only is here spoken of:]

The epithelial cancer affects usually the skin or a mucous surface in the first instance. It differs from the other forms of cancer in being composed almost entirely of cells more or less flattened out, and closely resembling those of ordinary epithelium; it does not present the malignant qualities in so marked a degree; it is more tardy in its progress, sometimes remaining for months or years in a quiescent state, or growing very slowly; it generally appears at some part of the skin or mucous membrane which has been exposed to a long-continued irritation, and its ravages are confined to the vicinity of that spot and to the adjacent absorbent glands; that is to say, it does not often make its appearance in any other organ, being, in a greater measure than the other forms of cancer, a local affection, less associated with any particular diathesis, and much less likely to return after extirpation.

For these reasons some pathologists are inclined to exclude the epithelial species from the family of cancer; mistaking, as it appears to me, differences in degree for differences in kind, inasmuch as the epithelial disease does really present all the leading features of cancer, though it may do so in a less decided and less active manner than the other members of the class. It is attended with the destruction of the original tissues whenever it occurs; it possesses the quality of spreading from point to point, assimilating the adjacent tissues of

every kind and in every direction, and reducing them all to one homogeneous structure; it affects the neighbouring absorbent glands, converting them also into a substance like the parent mass; and it is prone to decay and ulceration; moreover, it is unceasingly destructive; it yields to no treatment, and pursues its relentless course till death puts a stop to its ravages.

Watch the progress of the disease when it affects the lip, by far its most frequent seat. It usually begins on the edge of the lower lip, a little to one side of the middle line, probably at the spot where the pipe is habitually rested. I have seen it in the middle of the lip, originating in one of those cracks which are often so troublesome in that situation, and in two or three cases have met with it in the upper lip; in one of the latter it originated in the cicatrix of a wound inflicted several years previously. A slight thickening or wart-like elevation of the skin is generally the first symptom; the cuticle is also thickened at the part, and, in course of time, becomes rubbed or scratched off, leaving the surface a little abraded or cracked, or superficially ulcerated. Upon this a succession of scabs are formed and detached, while an increasing lump is produced underneath them, and the ulceration proceeds deeper; so that in the course of time a considerable ulcer is engendered with an indurated basis, an excavated, or deeply fissured, or warty surface, covered with white dirty secretion, or perhaps with pale firm granulations, and having a sinuous, raised, everted margin. The discharge from these ulcers is thin and pale, like serum; occasionally it is mixed with blood. They are not painful or tender, and the patients often think little of them. However, they gradually increase, extending along the margin of the lip and towards the chin, the thickening and induration preceding, the ulceration following, till the whole lip and part of the cheek may be involved in the disease. Before such extensive ravages have been effected, the absorbent glands under the jaw are generally found to be enlarged and hard, the skin over them becomes adherent and inflamed, and ultimately giving way, an ulcer is formed which extends deeply, presents the usual cancerous aspect, and leads to the like fatal termination. If a section be made through the ulcer in the lip, even in an early stage, its indurated basis is found to consist of a compact, opaque white, pearly substance, of uniform appearance, or speckled, it may be, with small yellowish spots, which are softer than the rest of the mass, and which are generally situated in greatest numbers near the ulcerated surface. In this substance all the natural tissues of the lip are blended and lost. Not only are the skin, the mucous membrane, and the labial glands transformed, or assimilated by the new structure, but the muscular fibres of the orbicularis as well as the areolar and fibrous tissues are traceable into the mass and are lost in it. When examined under the microscope the new substance is found to be composed almost entirely of flattened cells, like those of epithelium, compressed together and arranged in laminae superimposed upon one another. Some of those which are newly formed or which are swollen by the imbibition of moisture, are round, oval, or fusiform, and present nearly the characters of the ordinary cancer cell. It is an interesting fact, first announced, I believe, by Mr. Paget, that the microscopical characters of the diseased absorbent glands correspond with those of the primary disease in the skin; the glands, like the

tissues of the lip, being converted into masses of flattened and closely compressed scales, intermixed with cells in various stages of transformation. This fact, taken in conjunction with the acknowledged success that attends the removal of epithelial cancer of the skin, makes us somewhat bold to extend our incisions for the purpose of extirpating also the morbidly-affected glands.

The disease is most commonly seen in elderly men, though middle-aged and even younger men are sometimes affected by it. The patient's health generally appears to be good till it becomes impaired by the distress, discharge, and inability to masticate, occasioned by the extensive destruction of parts about the mouth. A complete and permanent cure in most instances follows the entire removal of the mass by the knife, which should be done at an early period; before the absorbent glands are involved, if possible, because they are sure to enlarge and lead to the results just described when they have begun to participate in the disease. Occasionally we find this to be the case after the operation, although there was at the time no evidence of their being in a morbid condition. In three or four cases, after the removal of the mass from the lip, and when the cicatrix remained perfectly sound, I have known the disease spring up in the periosteum, make its way through the jaw, and destroy the patient. Even the complete excision of the portion of the jaw thus involved does not always save the patient.

In the cancer of the penis and of the scrotum the progress of the disease is very much the same as in the lip; the ulcer originated in a pimple, a wart, or a little thickening of the skin, has the same foul or coarsely granulating surface, everted edge, and indurated base, goes on increasing with equal or even greater virulence, involves the inguinal glands, and destroys the patient in a shorter space of time than the corresponding affection of the lip. I have seen the disease at the anus, on the extremities, the trunk, the face, and head, and believe it may attack the integuments at any part of the body. It presents very much the same characters, and runs the same course in whatever situation it occurs; exhibiting the qualities of malignancy in a sufficiently marked manner, quite as strongly, indeed, as we could expect, considering that it is very generally the result of some local irritation.

Nevertheless it must be admitted, and this is one of the most interesting features in their pathology, that these cutaneous growths vary a good deal in their malignancy;—so much as to constitute, it would seem, a very instructive link between simple hypertrophy and genuine cancer—between an ordinary wart and well-marked scirrhus, proving that these diseases must be studied in their relation to one another no less than in their points of difference, if we would attain a correct idea of their real nature. There is good reason to think that the neglect of this mode of considering the subject, together with the too great stress which is usually laid upon the distinctive features of cancer, has been the source of many narrow views, if not of much misconception, upon this very important class of disease. Any information upon this subject which the cutaneous growths may afford, is peculiarly valuable, because they are directly under our observation; and if there be any relation between simple and malignant disease, we may expect to find some evidence of it in them.

Now, there are numerous instances of warts occurring upon the skin in elderly persons, respecting which we have a difficulty in deciding whether they be cancerous or not, and which we are in the habit of extirpating, because we know that if they are allowed to remain they will go on increasing, will in the long run ulcerate, affect the adjacent glands, and terminate fatally. For example, a healthy man, *æt.* 63, was in John's ward, a year ago, with a broad, flat, warty growth on the right temple: it overhung the surrounding integuments, which was purplish and a little pimply. The surface of the growth was covered by a soft, white secretion, and when this was washed away it was seen to be granular and warty, with superficial ulceration at places. There was no induration about its base, and no enlargement of the adjacent absorbent glands. It had commenced a year and a half previously. About the nose were several small pimply or warty elevations of the cutis, which he said had existed for a longer time than that on the temple, though the latter at its commencement resembled one of them. I removed the growth, completely dissecting it away from the temporal fascia, to which it was loosely connected by cellular tissue. After the wound had healed there was a return of the disease at one spot in the edge of the cicatrix, requiring a second operation, which left him quite well. A short time ago the part was sound, and the warts on the nose remained unaltered. A section of the mass showed it to be composed of pale, blunt, thick fibres, parallel to one another, and at right angles to the surface of the body, doubtless enlarged and elongated papillæ, together with epithelial sheaths of papillæ. This appearance is often seen in cases of the like kind, and is probably the result of a change analogous to that which causes the thickened striated condition of the intestinal muscular coat accompanying cancer of the bowel. The association of an actively increasing warty growth with a number of others of similar appearance which remain in a quiescent state is very common. I remember a chimney-sweep, the subject of cancerous ulcer of the scrotum, whose skin was covered in many parts of the body with little warty elevations, attributed by him to the same cause as the more malignant disease in the scrotum, viz., the irritation of the soot. They were in a quiescent state, and hardly attracted attention.

[The author here narrates two cases of warty growths, both of which ultimately caused death. He then proceeds as follows:]

These warty growths, which exhibit the stubbornness, and are apt to assume the destructiveness of malignant disease, are almost always met with in elderly persons. It is the best plan to extirpate them at once, where that can be done, and not to waste time in the application of caustic and other remedies, which are more likely to excite than to repress the growth, and which often hasten the enlargement of the absorbent glands. I remember regretting that I had treated with nitrate of silver a warty growth of this kind on the labium, in a woman, *æt.* 60; for though the growth was without induration, presenting the appearance of a simple affection, and was diminished in size for a time, yet it subsequently advanced more rapidly, the inguinal glands participated in the disease, ulceration took place, and proceeded as in ordinary cancer, and the patient died.

Perhaps it may be stated, as a general rule in these and in other affec-

tions of a similar kind, that the degree in which the natural structure of the part is altered, will be found to be porportionate to the malignancy of the disease. Thus, where the change consists simply in an outgrowth of the papillæ, with a thickening of their epithelial coats, after the manner of the wart, there the mass is slow in its increase, slow to extend to the stratum of tissue under the skin, slow to ulcerate, slow to make any impression upon the absorbent glands, and may be removed with great prospect of a complete cure. Secondly, where the warty disposition is less manifest, the alteration of structure being attended rather with a destruction of the papillæ than their hypertrophy, and with the substitution of flattened cells, like those of epithelium, for the natural tissue of the cutis; there the malignant qualities are more evidently displayed, the mass increases more quickly, extending beneath the skin, involving the subcutaneous areolar tissue, muscular fibres, and even the bones; it ulcerates at an earlier period, the absorbent glands are more quickly affected, and we are not quite so free from apprehension of a return after removal. Still the disease is generally local, unattended with any constitutional indisposition, and is not likely to appear in distant parts. In the third class of cases, which comprises the scirrhus or encephaloid cancer of the skin, the morbid elements have still less relation to those naturally existing, the tissues are replaced, not by epithelial, but by cancer cells, or nuclei—that is to say, the new products do not exhibit a tendency to liken themselves to any one of the components of the skin, but assume the form, and are endowed with the endogenous productive qualities of cancer-cells; they breed others in their interior, instead of being themselves transformed into any kind of tissue. In these cases the disease commences, not with a wart, but with a tubercle, spreads quickly in all directions, ulcerates, attacks the absorbent glands, and is commonly associated, either as a primary or secondary affection, with cancer of some other organ; its removal, therefore, is attended with comparatively little hope of a permanent cure.

The warty growths described by Mr. Caesar Hawkins and others as cicatrices, more particularly in the cicatrices of burns, partake, I suppose, in a greater or less degree, of the nature of epithelial cancer, being, for the most part, intractable by ordinary means, and requiring extirpation for their cure. I have not happened to meet with any cases of this kind.

Epithelial cancer attacks mucous surfaces, no less than the skin; sometimes commencing under the tongue, about the orifices of the salivary ducts, in the form of an indurated elevation of the membrane; it extends upon the jaw, and the under surface of the tongue, as in the case of the woman from whom I lately removed the mental portion of the jaw, the anterior and under surface of the tongue, and the parts intervening between the two. The patient recovered, and has not at present (six months after the operation) suffered any relapse. In another woman the disease, commencing at the same spot, had involved the submental and submaxillary absorbent glands to too great an extent to admit of extirpation, and proved fatal within two years from its commencement. More commonly it attacks the tongue, beginning on one side, opposite the molar teeth, with a little thickening and induration of the part; the papillæ being sometimes prominent,

so as to give it a warty appearance, ulceration soon follows, and extends into the substance of the organ. The pain or inconvenience attendant on the early stage of the disease not being great, we frequently do not see the patient till an excavated ulcer of considerable size has been formed, with a raised indurated base which extends probably to the side of the fauces, and involves the mucous membrane between the tongue and the jaw. The ulcer has a foul, grayish surface; and the induration is caused, as in other cases of the like kind, by the infiltration of a new product in the structure of the organ, and its substitution for the natural tissue. Examined microscopically, this new product is found to consist of epithelial cells, compressed and matted together, perhaps concentrically arranged, or elongated, and showing some tendency to split into fibres. In the further progress of the disease the palate and lower jaw, and submaxillary glands become involved, the movements of the tongue and jaw are impeded, deglutition is difficult, the flow of saliva increased, the breath fetid, and the patient's condition is altogether very miserable during the short period of life which remains.

On the whole, there can be no doubt that, although it often is excited by a local source of irritation, such as a decayed tooth or stump, the epithelial cancer of the mucous membrane of the tongue and mouth, is far more actively malignant in its progress than when it affects the skin. Indeed, I think it exhibits in this situation as rapid and as determined destructiveness, with, perhaps, as great disposition to return after extirpation, as do the scirrhus and encephaloid cancers in other parts of the body; though it is not so likely to affect distant organs. Our hopes, therefore, of ultimate success from operative interference, are far less than in the treatment of the corresponding affection of the skin. Nevertheless, we may give the patient the benefit of the chance, when there is a fair probability of our being able to remove the entire mass.

ART. 46.—*On the Nature and Causes of Genu Valgum, or Knock-Knee.* By Professor BOCK.

(*Bibliothek für Lægen and London Journal of Medicine*, Aug. 1851.)

The most common deformities of the knee-joint may be arranged under the four following heads.

1. Contraction of the knee (*contractura genu*) is the name given to the condition in which the knee is in a state of abnormal constant flexion, with considerable, little, or no power of motion in the joint.

2. Recurved knee (*genu recurvatum*). Here the knee is in a state of superextension, and the popliteal space forms the apex of an angle pointing backwards.

3. Genu varum, or bow-leg: called by the Danish wheel-leg (*Hjulbenet*).

4. Genu valgum, or knock-knee: in Danish, calf-knee (*Kalveknæet*); in German, goat's-leg (*Ziegenbein*), X-leg (*X bein*).

The name genu valgum is borrowed from an imperfect analogy with pes valgus. In the latter, the foot is thrown outwards. In genu

valgum, it is not the knee, but the tibia which is pressed outwards; and the more correct denomination would, therefore, be tibia valga, if the analogy with the foot were preserved. The same is the case with genu varum.

Genu valgum has been but imperfectly described in surgical works. Prof. Bock has for some time been collecting materials for a more accurate knowledge of this deformity, and now publishes the results at which he has arrived.

Pathology.—In the normal condition, the knee-joint deviates from the long axis of the lower extremity, on account of the greater extension downwards and inwards of the inner condyle of the femur.

The thigh-bones hence converge downwards, especially in females, in whom the pelvis is wider, and the neck of the thigh-bone is larger and directed more outward. It is the unnatural exaggeration of this condition to which the name of genu valgum is given. It might be supposed, that this affection is more frequent in the female sex: such, however, is not the case, for it is far more rare in women and girls than in men and boys. Both knees may be affected, but one is generally more so than the other; and it is then almost always the right knee which is the chief seat of the disease. When one knee alone is affected, it is the right in about twice as many cases as the left. The origin and progress of the disease are gradual and almost imperceptible.

The knee forms the apex of a triangle, the other angles of which are at the ankle and the great trochanter, so that the base consists of the straight line which may be drawn between these points. The altitude of the triangle, or the perpendicular line from the knee to its base, points out the greater or less degree of the disease; this may naturally be denoted by the anomalous proportions of the angle at the knee, which, from being very obtuse, becomes, in the more advanced stages, a right or even a very acute angle.

On examining the knee, the following changes are found:—On its anterior surface, the united large tendons of the extensor muscles, and the ligamentum patellæ, are found much stretched; and the more so, in proportion as the knee is bent backward as well as inward. The patella is displaced outwards; so that, in a more advanced stage of the disease, it rests on the external edge of the knee, in front of the condyles of the femur and tibia. The knee loses its natural convexity forward, and becomes acute-angled on its anterior and outer edge; and the anterior part which lies more interiorly forms a plano-convex region in front of the inner condyle. On the outer surface of the knee, or in the angular bend, we often find the tendon of the biceps much stretched, as well as one or two portions of the external ligaments extended into sharp strings. The external condyles, both of the femur and of the tibia, are small, and can scarcely be felt in the more advanced stages of the disease. When the curvature is very remarkable, there is a transverse furrow in the skin on the exterior part of the knee. The natural hollow of the ham is obliterated; and the posterior surface of the knee-joint is more or less plano-convex. The inner surface of the knee forms the obtuse apex of the angle; and here the internal condyles of the femur and tibia are felt always

prominent, usually hypertrophied, and, in rachitic cases, enormously swelled.

The condition of the whole extremity is at the same time changed. The thigh assumes an oblique direction downwards and inwards, towards the opposite knee. The knee is directed inwards, against or behind the sound knee, and the shin-bone assumes a direction downwards and outwards, so that the foot is at a great distance from that on the sound side. As the disease advances, the direction of the foot is changed: but this will be treated of under the head of complications. In children, where the affection is of a truly paralytic nature, and has followed convulsions, there has been constantly observed a sinking of the temperature, as much as two degrees, in the diseased limb. In grown persons, the author has not found this symptom. In consequence of the bending of the limb, the distance from the pelvis to the sole of the foot is diminished; the direction of the pelvis in walking consequently becomes oblique, so that the anterior superior spine of the ilium may be found an inch lower on the affected than on the sound side. This obliquity of the pelvis becomes gradually permanent, so that it is observed both during walking and standing. In cases where the deformity has not yet reached a high degree, and in children, the limb can generally be brought back with the hands to its natural position: but the tension is felt to increase in the biceps femoris and external ligament of the knee-joint; and, when the force is removed, the limb instantly resumes the bent position. In rachitic cases, not only the internal condyle of the femur, but also, in a still higher degree, that of the tibia is enlarged. The concavity inwards, which is naturally formed by the tibia, is obliterated; and, in the more advanced stages, there may even be a pretty conspicuous convexity, so that the whole extremity more resembles a bow curved inwards than an angular bending. The knee-joint generally retains its mobility. In the higher degrees of curvature, this is indeed somewhat limited; but either true or false anchyloses are seldom met with as consequences of the affection of the knee which has been described.

When both legs are curved, the right leg is always slightly more bent than the other, and the apices are turned towards each other. This has given rise to the German designation of the disease—*X-leg* (*X-bein*).

In this affection, the patients halt in a peculiar manner. If one bone only is affected, there is lameness—(a) because one extremity is too short; (b) because the foot of the diseased limb falls beyond the centre of gravity of the body; (c) because the affected knee, in walking, both hinders the free swinging motion of the healthy knee, and is in its turn impeded by the latter. Each of these causes has distinct results, which modify both the direction of the limb and the lameness. When the extremity is too short, there is a natural attempt to compensate the defect; and this is effected partly by the already mentioned obliquity of the pelvis, and partly by the formation of a curve in the healthy leg. In healthy individuals, who have for some time had genu valgum, there will almost always be found a slight but true contraction of the knee in the sound leg. But in children, almost without exception, the other knee will become curved, either as genu varum or

valgum. The outward direction of the tibia and foot causes the peculiar up-and-down lameness to become rotatory and swinging, like mowing, and this swinging is increased, to prevent the collision of the knees during walking. In the more remarkable modification, the body seeks to maintain its equilibrium; and it attains this object more completely than in many other forms of lameness—*e. g.*, from congenital dislocation of the thigh. This is partly affected by the position of the pelvis, and partly by a greater degree of mobility in the lumbar vertebræ. The diseased leg is generally sufficiently powerful, in persons affected with genu valgum, to enable them to walk for some distance. Naumburg has compared their gait to that of ducks; but this is scarcely correct. The gait is more swinging than waddling, as in persons with rachitic distortion of the pelvis or double congenital dislocation of the hip-joint. The patient who has genu valgum in one leg, endeavours, while standing, to preserve the centre of gravity by moving the sound leg somewhat outward beyond its natural position. Hence the points of support in the feet are at a greater distance from each other, and the surface within which the centre of gravity of the body can fall is greatly increased. Patients with double genu valgum usually, when standing, support the knees against each other, so as to form there a mediate resting point for the body, while the feet stand out from each other.

Complications and Secondary Deformities.—These are more various in this than in any other deformity whatever. Where the disease has commenced in youth, a curvature of the spinal column will generally be produced by the obliquity of the pelvis and the lameness. The affected limb is not unfrequently more or less atrophied. Anchylosis of the knee-joint rarely occurs, unless some chronic disease have preceded or accompanied the deformity. Prof. Bock has, however, seen two cases of anchylosed knock-knee in elderly persons; in these the limb was also directed backwards. But it is the feet which are especially influenced by the gait produced by genu valgum; and hence knock-kneed patients have, almost without exception, some deformity or other of the feet. The patient may, in consequence of the abduction of the tibia, tread and walk on the inner edge of the foot, which hence often becomes callous. Hence there is a disposition to flat-foot, which is the most frequent complication. But, almost as frequently, the genu valgum is complicated with club-foot; and, as the shortness of the limb leads the patient instinctively to endeavour to touch the ground with the points of his toes, it is evident that these forms will be accompanied by a greater or less degree of talipes equinus. It has been hitherto impossible to determine the reason, why these secondary deformities of the feet should in some cases assume one form, and in others another. In certain peculiar cases, the deformity of the knee is secondary. A patient in Dieffenbach's ward had had, from childhood, *cyphosis accurvata* of the lumbar vertebræ; in his youth, varus had been developed in both feet, and, in his sixteenth year, he had become knock-kneed in both legs. Not uncommonly there is genu valgum on one side, and genu varum on the other, accompanied by the same, or by distinct deformities in the feet.

Causes.—There is no doubt that genu valgum may be congenital;

this is, however, a rare occurrence. The causes of the development of the affection in latter years are partly external, partly internal, but most frequently both are combined. The greater convergence of the thighs in women may be supposed to be a predisposing cause; and Lessing says that this affection is more frequent in females than in males; this is, however, incorrect, for the deformity is twenty times more frequent in the latter sex, than in the former. Scrofula and rickets may be considered as predisposing causes, especially the latter. It still more frequently produces genu varum, in which case the external condyles of the femur and tibia are most affected and enlarged, while a similar swelling of the internal condyles gives rise to genu valgum.

Genu valgum may, as a general rule, be considered as a disease of a paralytic nature, and its most usual cause as a depressed state of innervation. Hence the commencement of the affection is limited to certain periods of life, in which the nervous centres undergo a more than ordinary degree of disturbance, connected with the state of development. Genu valgum is developed either during the first dentition or during puberty. This rule is so constant, that the only exceptions are the cases in which some local malady has given rise to the deformity: but these are comparatively very rare. In children, the disease has always, in the author's cases, arisen between the eighth month and the completion of the second year, and has always been preceded by difficult dentition, with fever, convulsions, violent hooping-cough, or, as in one case, acute exanthematic fever. This agrees with what has been stated by Heine, with regard to nine cases of knock-knee observed by him. The external causes, which may give rise to the affection at this age, and under the circumstances which have been mentioned, are, that the children *walk* too early, or too soon after a weakening illness, while they have not yet recovered strength, or that they are constantly carried on one arm, by which one knee is pressed inwards.

Among 221 cases of genu valgum, which the author has observed, 17 originated during the first dentition. In a few instances, he has not been able to ascertain the period; but in almost all the rest, or about 200, the deformity commenced between the fifteenth and eighteenth years, or at the time of puberty. In all these cases, there was an evident external cause for the deformity—the patient's position or occupation; but the limitation of the age referred to above, together with the fact that many following the same occupation, under apparently similar external circumstances, do not become deformed, seem to show that the external conditions are not sufficient to produce the disease, unless they meet with a corresponding disposition in the system of the individual, or rather in his development. We correctly consider the periods of dentition and of puberty as stages of development, in which the body is more obnoxious, than at any other period, to the hurtful operation of various extrinsic or intrinsic influences. That the deformity in question less frequently arises during dentition than during puberty, may be ascribed to the fact, that the influences above referred to, are more easily resisted by the system in the former than in the latter period.

This deformity is more frequent in smiths, joiners, bakers, and

grocers. In 1846, there were in Copenhagen 644 smiths, among whom were:—

225 blacksmiths and anchorsmiths; of whom 42 had genu valgum in the right leg, 7 in both legs = 19 per cent.

359 locksmiths; of whom 23 had genu valgum in the right leg, and 3 in both legs = 7 per cent.

30 nailsmiths; of whom 17 had genu valgum in the right leg, and 5 in both legs = 73 per cent.

There were thus, in all, 97 cases of the deformity among 644 smiths, making an average of 15 per cent.

The following are the immediate causes of the frequency of the deformity among smiths. Almost all smith's work necessitates the long maintenance of the same position, whether at the bellows, the anvil, or the vice; and, while standing in this position, they often have to use much force, which leads them to seek a firm and solid footing. The feet are hence removed from each other, either both sideways, or one—always the left—forwards. In both these positions, any powerful effort will tend to produce genu valgum; for a great part of the weight of the body will, under the powerful movements of the arm and upper part of the body, act on the knee like a pressure from above and below. In blowing bellows, a work in which apprentices are generally employed, they must often stand uninterruptedly at work for several hours. At the vice and anvil, the left foot is placed forwards, the right backwards and rotated outwards, so that the toes are turned to the side. In this position they often stand with the leg and foot unmoved for several hours, while the upper part of the body is subjected to constant and violent swinging, in order to use the file or hammer. The influence of the position on the knee will be easily seen by any one who will make a trial of it. Blacksmiths and anchorsmiths are besides constantly liable to have to bear heavy burdens. The fact that nailsmiths are most liable, in spite of their work being least laborious, is explained by the circumstance that they almost constantly use a kind of vice, which is fixed near the ground, and against which they all, without exception, place the inner surfaces of both knees, "because it is impossible for them to work in any other way."

Of 1340 journeymen carpenters, about 60, or 5 per cent., had genu valgum. It has been impossible to make very accurate observations on this class, as they endeavour to conceal the deformity as well as they can. It does not reach in them so high a degree as in smiths. Notwithstanding that the work of carpenters is less laborious than that of smiths, considerable exertion is required: most of the labour of carpenters, as sawing, planing, and polishing, requires the same positions as are here described in speaking of smiths. The author has also observed that carpenters carefully watch for this deformity, and endeavour to prevent its development. Many masters have told him that they have had to set free their apprentices, or, in the first year, to caution them against habituating themselves to the posture which favours the commencement of the disease.

Of 334 journeymen bakers, 27 were knock-kneed; 24 were affected

in both knees, the right being generally more bent than the left. One individual had the curvature only in the right knee. In 16, deformity had not reached a very high degree. Notwithstanding that bakers seem to be affected with this malady more than the other classes above named, and several of them have some difficulty in walking, the deformity is not strongly developed. The disease does not arise from the position in which they stand while kneading dough; for in the first years, when this malady is developed, the apprentices are not employed at this labour. But the deformity is produced by standing at night at the board, often half asleep or contending with sleep, seeking for rest in the most varied positions; or partly by carrying water or sacks of corn. It is possible also that the great changes of temperature in attending to the oven may have some influence; but the author considers the night watching as the most essential cause, for the constant struggling with sleep produces a relaxation of the muscles. All the bakers in whom he observed genu valgum, also had flat-foot; and the latter deformity, in several cases, had preceded that of the knees.

The generally received opinion, that grocers' apprentices should be liable to genu valgum, from standing long, or from shutting drawers with their knees, Prof. Bock has not found supported by facts: for, among 2000 individuals of this class, he has in vain sought for any examples of this deformity. It is said to have been more frequent formerly; and what has most surely contributed to its removal, is the reform in working hours, it having been formerly the custom to keep the shop open much later at night, and to open it earlier in the morning.

It hence results, that the general causes of this deformity are certain positions and habits, where these are often repeated, and especially at times when the body is more susceptible of their influence than at others. Other more accidental causes are, allowing children to walk too early, carrying heavy burdens, ulcers on the inner border of the foot, a burn on the outer side of the knee, resection of the upper end of the tibia, tuberculosis in the legs, caries, necrosis, rickets, syphilis, chronic abscesses, inodular bodies, &c.

The knee-joint is, properly speaking, a ginglymoid articulation, and its essential movements are merely flexion and extension; but the hinge-like movements are not so absolutely limited as in other analogous joints. The knee possesses a slight power of pronation and supination, but only when bent; and this power is dependent on the rotation of the tibia on its long axis, being limited, when the limb is extended, by the crucial ligaments. It is not connected with any peculiar apparatus, as in the rotatory movements of the radius and ulna, and may properly be considered as a slight twisting, which becomes possible on the tolerably flat upper surface of the tibia, when the knee is in such a position that rotation is not prevented by the extensor muscles. The knee has hence no power of abduction or adduction; and therefore the motions of this joint do not help to explain a deformity, which is characterised as an abduction of the tibia. Its immediate cause must be sought for in the parts which form, hold together, and strengthen the joint.

Although the part which these structures play in the production of this deformity is for the most part passive, the biceps femoris seems to be active in those positions in which genu valgum is chiefly produced, and to exercise the greatest influence on the increase, if not on the origin, of the deformity.

Supposing that one of the external influences which have been referred to should steadily act on the knee-joint, at a time when either convulsive disease (first dentition) or an unequally powerful development, perhaps in connection with a rapid slender growth (puberty), have weakened the nervous system; then the parts on the inner side of the knee have no power of opposing the pressure outwards. They are overstretched and slackened; and thus the conditions arise for the commencement of genu valgum. The most important relaxation takes place in the internal lateral ligament, which is lengthened and thinned in its whole extent: in the more advanced stages, the four tendons on the inner side of the knee are also lengthened. On the other side of the knee, the tendon of the biceps, and both the external lateral ligaments, as well as the posterior, are strongly stretched.

When the deformity commences, the angle at which the biceps femoris acts constantly, becomes more and more favorable to its increase. This is, however, still more favoured by the circumstance, that the weight of the body, which in the normal state is uniformly diffused over the upper surface of the tibia, is now transferred to the upper surface of the outer condyle of that bone. The inner condyle of the tibia, and that of the femur to some extent, are atrophied, even in cases which are not of rachitic origin. This hypertrophy is greater, in proportion to the youth or small size of the patient at the time when the deformity commenced. In rachitic cases, it sometimes attains an enormous degree. It is probable, also, that the internal semilunar cartilage is somewhat atrophied.

Prognosis. As genu valgum is a deformity which depends rather on relaxation than on any active contraction, the prognosis in general may be considered as scarcely favorable. It is, however, curable, when it comes under treatment in an early stage, and, which is more important when the circumstances which have produced and kept it up can be removed. In young children the knee can be brought with the hand into its normal situation; and in these the prognosis is most frequently good, when the necessary continued watching of the growth can be maintained, and when the general condition of the child does not give a tendency to the continuance of the disorder, or to relapses. In young men, also, the deformity can be cured, when there are as yet no consecutive changes. But, under all circumstances, the removal of the deformity must not be looked on as complete; for, even when the curvature is completely removed, it will still be necessary to employ fitting means to ensure the result desired.

Treatment. The treatment of genu valgum in young children, consists in mechanical means to keep the knee outwards; and this must be always supported by such general treatment as the constitution of the child may indicate. The most simple apparatus is a splint, either straight or convex outwards, reaching from the hip-joint over the outer ankle, and fastened at the ends with circular bands. This appa-

ratus, however, hinders the child from walking, and therefore can only be used constantly at night; hence it can only be used in the more unimportant cases. It is preferable to make use of a steel spring, convex outwards, furnished at the height of the knee with a hinge, fastened at the hip to a bow which can be stretched round the pelvis; just over the outer ankle, the lower end of the spring passes into another bow, which can be fastened round the tibia. The spring is furnished on the outside, through its whole length, with buttons, on which are fastened small leather straps, four or six in number. These are brought round the legs; and on the inner side of the knee they glide between flat *pelottes* which exert a pressure from within outwards, when the straps are stretched or buttoned. An apparatus of this kind may be worn for a long time, and its action gradually increased. It must be used for at least a year after the deformity is removed, and even then it must be gradually ascertained whether it can be left off.

The same apparatus, on a larger scale, and with greater strength of spring, can be used in grown persons. The patient can easily accustom himself to use it—indeed, he feels comfortable with it. In grown persons it will generally be an indication, before employing mechanical treatment, to divide the tendon of the biceps, or of the most stretched fibres of the lateral ligaments, but generally only of the posterior lateral ligament. The mechanical treatment, after tenotomy, may appear tedious; but the result will be more perfect: but without great perseverance on the part of the patient, and careful watching of the deformity for several years, the treatment of genu valgum will in general be ineffectual.

ART. 47.—*On Gouty Inflammation of the Structures of the Ear.*

By WM. HARVEY, ESQ., M.R.C.S.

(*Prov. Med. and Surg. Journal*, May 28, 1851.)

Gouty inflammation of the ear, whether it attacks the external or internal part of the ear, always appertains to the uncertain class of suspicious diseases, for if the patient be really re-established in health, still he is never secure from relapses. The prognosis is most favorable when the inflammation is seated in the external part of the ear, when the individual is young and strong, and is in such a state that everything necessary for his cure can be applied. It is less favorable if the patient is very weak and sensitive, is advanced in years, or of a cachectic habit, and has been frequently exposed to attacks of gout; changes have then taken place in the meatus and membrana tympani, whereby the nutrition of these parts, as well as the function of hearing, becomes injured. The internal gouty inflammation of the ear yields an unfavorable prognosis, for in it such disturbances and total changes of the tissues and structures take place, are followed, if not by complete deafness, at least by an extreme degree of hardness of hearing.

In the treatment of gouty inflammation of the ear, the first care of

the surgeon should be to see that the patient is withdrawn from the noxious influences which first occasioned the disease, and that the inflammation is checked. In order to attain this end, every action of cold damp air, and above all, of everything which might promote or add to the congestion of blood in the head and ears, must be avoided; on the contrary, living in a dry, temperate air, spare diet, food easy of digestion, and perfect rest of mind and body, are recommended. It is easy to see that in the commencement the so-called anti-arthritis, which in general belong to the class of the exciting medicines, are not applicable, and that only an appropriate antiphlogistic mode of treatment is admissible. In this case one must be directed partly by the age and constitution of the patient, partly by the seat and degree of the inflammation, as well as by the violence of the accompanying fever. If the inflammation of the meatus be slight, no bloodletting is required, but if it present a violent character in all its phenomena, it should be reduced by local bloodletting,—by means of leeches placed around the ear. But if the inflammation has seized on the internal ear, and has attained considerable intensity, then, in case the patient is strong, plethoric, and not advanced in years, the practitioner may employ a proportionately copious venesection; he should, according to the violence of the local symptoms, place a greater or less number of leeches around the ear, and apply the cupping-glasses to the nape of the neck, to the shoulders, and the spine. In weak and elderly individuals, and where the inflammation is not violent, or is chronic, leeches or cupping-glasses suffice. Internally we should prescribe mild antiphlogistic aperients in such cases, so as to produce copious evacuations by stool, and a derivation from the head and ear as quickly as possible. After the inflammation has been moderated, it is very easy to remove it entirely from the ear. Together with careful attention to the bowels, remedies which moderately promote the cutaneous transpiration are subservient to this end; accordingly I have found the continued administration of guaiacum, combined with alkalies and colchicum, or ammonia, the most efficient remedies; at the same time we should not neglect repeatedly to employ cutaneous irritants, which derive powerfully, namely, acrid foot-baths, sinapisms, and blistering plasters to the nape of the neck, and to the shoulders. Should the inflammation of the ear be a consequence of a suddenly suppressed action in any joint whatever, we should apply here a cutaneous irritant, which may act rapidly. In less urgent cases we may employ frictions of croton oil, or tartar-emetic ointment, over the region of the mastoid process, and on the nape of the neck, blisters to be kept open, issues on the upper part of the arm, and setons in the neck. If by the internal treatment the inflammation is crushed, and one has now to do only with the after-consequences of the same, then we should direct our efforts against the gouty disposition, and seek to ward off relapses; we should, accordingly in the first place, prescribe an appropriate dietetic line of conduct, recommend the use of food simple and easy of digestion, forbid strong beer, acid and heavy wines, liquors and other such drinks, as well as all heating, flatulent, fat, salted, and highly-seasoned food. The patient should take sufficient

bodily exercise, not tarry too long in bed, clothe himself sufficiently warm, in order to protect himself from catching cold, cover the head with a warm cap, and use friction carefully over his body.

In order to remove the disturbance in digestion, the acid formation of mucus, obstruction, &c., those resolvent and bitter remedies so frequently celebrated in gout, will be found serviceable, as the infusions, decoctions, and extracts of taraxacum. Several aperient and diuretic mineral waters act very beneficially, more especially in the case of congestions in the head. To act on the lymphatic system and the excretions generally, sulphur will be found useful. With respect to the local treatment of arthritic inflammation of the ear, whether the external or the internal parts of the ear be affected, nothing further is to be done at first except to cover the ear and the entire side of the head affected with warm dry cloths and the like. Every moist application is carefully to be avoided, as neither the lesser nor the greater degree of arthritic inflammation of the ear will admit of any such. In order to remove the morbid sensibility of the nerves of the ear, we may rub into the parts surrounding the ear, the fluid ointment mixed with opium or extract of belladonna, or allow a solution of one grain of morphia in half an ounce of olive oil to be dropped in. In case of abscess forming in the meatus, and suppuration in the cavity of the tympanum, much relief will be afforded by a free liberation of the integuments covering the mastoid process, and kept discharging by a sponge tent in the wound for some time after; soothing and anodyne vapour and poultices are to be employed. Should a purulent discharge have established itself, the meatus must be carefully dried and covered with a compress or the like. Obstinate ulcers in the meatus should be treated with the *Tinctura Opii Camph.*; and even with the *lapis infernalis*. Should any affection of the mucous membrane set in, it is to be treated in the same way as in the case of the common catarrhal otitis. In order once more to awaken the sensibility of the ear, which has been changed by inflammation with respect to impressions coming from without, benefit will be derived from frictions with the volatile liniment, opodeldoc, oleum, cajeput, &c.

ART. 48.—*On Lesion of the Kidney.* By JOHN HENER, Esq.

(*Medical Gazette*, Aug. 8.)

[The author relates a case of injury from the passage of a cart-wheel over the abdomen, in which the symptoms during life pointed to rupture of the renal structure. He then introduces some general remarks. 1. On the way in which lesion of the kidney may prove fatal. 2. On the treatment of such accidents. On the first part he remarks:]

Death may be caused principally in two ways:—

1. By hæmorrhage.
2. By suppuration or effusion of urine and their consequences.

1. By hæmorrhage, which may take place either into the peritoneum or into the adipose and cellular tissue around the kidney. Death thus produced would be accompanied by the usual symptoms of in-

ternal hæmorrhage. But more frequently the blood passes into the bladder, and is voided per urethram, which occurs when there is no laceration of the capsule, but when the rent extends to the pelvis of the organ. And when we get the evidence of any injury to the lumbar region soon followed by pain in that region and hæmaturia, we may safely conclude that that blood proceeds from the kidney, Whether, however, blood remains confined in the body, or obtains exit, death from hæmorrhage may ensue, either quickly, from great loss of blood, or more gradually, from the frequent hæmorrhages, against which the system is unable to bear up; and, of the two, death more frequently results from secondary hæmorrhage. An instance of this is published in the 24th volume of the 'Medical Gazette,' by Mr. Cæsar Hawkins, where death ensued from secondary hæmorrhage ten days after the accident.

2. Death may ensue from effusion of urine and suppuration.

Should it so happen that the urine were extravasated into the peritoneum, the patient would most probably be destroyed by the peritonitis which would ensue, arising from the irritating effects of the effused urine. More frequently the peritoneum escapes, and the extravasated fluids reach no farther than the surrounding neighbourhood of the kidney. There inflammation sets up, which usually terminates in suppuration.

The patient whose case I have related lost his life by both methods I have mentioned. The frequent, and for a long time uncontrollable hæmorrhages, brought him to a very low ebb, and no sooner was he to a certain extent recovered from their influence, than his already debilitated system was called upon to bear up against the lowering process of suppuration and extravasation of urine. Under their combined influences he succumbed.

I have not mentioned that suppuration of the organ itself may occur after some injury, and become the cause of death. This must, however, be a rare event.

I will now briefly notice the treatment to be adopted.

We may learn from this case that though hæmorrhage may occur at the time of the accident, yet that the symptoms may nearly subside, and yet after a few days come on with greater vehemence. When, therefore, we are called to treat persons who have received injury to the loins accompanied by slight hæmaturia, though the symptoms may soon subside, we should remember that this is no sure criterion of the absence of important injury. We should therefore act upon the worst supposition, and cause the patient to remain quiet, and for some days rigidly to observe the horizontal position.

Cupping on the loins is often very serviceable, being succeeded by diminution of pain, and checking or obviating the tendency to hæmorrhage. This will sometimes suffice, but often the hæmorrhage is so serious in amount that its cessation becomes a matter of importance. For this purpose many drugs may be administered; such as acetate of lead and opium, tincture of sesqui-chloride of iron, matico, gallic acid, &c. The value and efficacy of these medicines are so well known, that it would be superfluous for me to do more than mention them.

There is one drug which I have omitted, which some practitioners

are fond of administering in hæmorrhage from the kidney. But when that hæmorrhage is produced by laceration its exhibition is, I think, very questionable.

Dr. Pereira remarks: "after the absorption of the turpentine it operates on the general system as a stimulant, and excites the vascular system, especially of the abdominal and pelvic viscera;" and in speaking of its exhibition to arrest hæmorrhages, he remarks, "it must only be employed in cases of a passive or atonic character."

It is true that in these cases the hæmorrhage may be passive, but still the inflammation, or, to say the least, the congestion which the injury occasions, is likely to be increased by the stimulating properties of the turpentine. For there appears to be no reason why, in the case of the kidney, our treatment should differ from that employed in injuries to other organs; for if in one of them extensive laceration had taken place, and inflammation might be justly apprehended, we should endeavour to secure for that organ, as far as we could, perfect rest and immunity from the discharge of its ordinary functions; and so ought it to be with the kidney; instead of risking the use of the turpentine, which would only stimulate, and increase the excreting duties of the kidneys, we ought to endeavour to arrest the hæmorrhage by some less objectionable drug. We should as far as possible relieve the kidneys of their ordinary occupations by acting vicariously on the skin. And I think in many diseases of the kidneys, especially in that form of inflammation and congestion which occurs after scarlet fever, that, if this principle were carried out, it would be far better than exposing the kidneys to the stimulating properties of the long catalogue of diuretics which garnish our 'Pharmacopœia.'

ART. 49.—*On some effects of the Use of the Bougie in Stricture of the Urethra.* By Dr. WILMOT.

(*Dublin Quarterly Journal*, Aug. 1851.

[The unpleasant consequences which may arise from the use of the bougie, are chiefly these:—rigors, hæmorrhages, false passage, irritable bladder, retention of urine, perinæal abscess, and infiltration of urine. The author comments on these in succession. Of rigors, he says:]

There is no circumstance more annoying to the surgeon, than the frequent occurrence of rigors after the use of the bougie. . . . They are most frequently due to rudeness in management of the instruments; but no one who has treated stricture on a large scale, can be ignorant that rigors frequently follow the use of bougies or catheters where the greatest gentleness has been observed. Rigors in connection with urinary disease are traceable to many different causes; they may be merely the accompaniments of stricture which has never been treated by the bougie, and closely resemble intermittent fever; they may be an indication of the formation of matter; or constitute a symptom of renal disease; or may result from the introduction of instruments. Rigors occurring from these causes require to be treated differently. When they are met with in connection with stricture which has not been treated, we should not delay the use of instruments, and in general it will be found that as the stricture

becomes absorbed, the rigors diminish in severity, and ultimately disappear altogether. We should be cautious, however, in introducing instruments in these cases, commencing with a small one, and increasing the size gradually. We should also prefer the gum elastic instruments. In conjunction, it will be prudent to administer pereira.

When the rigors actually depend on the introduction of instruments, various plans may be adopted, the most common of which is to administer opium immediately after the operation; should this fail he may try quinine. Frequently no preventive measures succeed, and we must then abandon the use of instruments altogether, as it is preferable to let the stricture advance, rather than that the constitution should be shattered by the effects of the surgical treatment.

[The author does not think the suggestion of Sir B. Brodie, to retain the instrument in the bladder, can be often followed without inconvenience. He also states particularly that a gum-elastic catheter will often not induce a rigor, when a metallic does so. He then proceeds to speak of hæmorrhage:]

Another unpleasant result from the use of the bougie is hæmorrhage. This seldom occurs to any great extent, except as a consequence of false passage, or laceration of the mucous membrane from rough usage; but a degree of bleeding, sufficient to excite uneasiness in the mind of the patient, often takes place without the least blame on the part of the surgeon. . . . There are no means by which bleeding can be altogether prevented, when the conditions now described (a soft vascular state of mucous membrane) are present, but the following expedients will diminish the chances of its occurrence. In the first place, it must be recollected that stricture is in general situated behind the bulb, at a part where the urethra takes a curve. A bougie, in its passage towards the bladder, impinges against this part, and if obstruction exists, the enlarged vessels are ruptured; on this account a gum-elastic catheter, number 4, softened by heat, will be the best. The other object is to render the urethra as straight as possible.

Irritable bladder is one of the commonest effects of the treatment of stricture by bougie, and is sometimes so severe as to demand the immediate relinquishment of the instrument. It should, however, be recollected that irritability of bladder may be the effect of the stricture, as well as of the use of instruments, and it is therefore necessary to ascertain if the irritability pre-existed, as in that case so far from the bougie being contra-indicated, we should steadily persevere in its use. When the irritability is accompanied by pain and scalding, there is no remedy so effectual as a combination of colchicum and hyoseyamus, as in the following formula:—Murray's Camphor Mixture seven and a half ounces, Bicarbonate of Sodæ a drachm, Colchicum Wine and Tincture of Hyoseyamus each two drachms.

[Retention of urine is next adverted to.]

This serious result arises in general from forcing the stricture, particularly with metallic instruments, inflicting some injury upon the mucous membrane of the canal; but some persons are so extremely prone to spasm from the introduction of an instrument, that retention of urine may readily occur without the least violence having been used. Now when retention arises from this cause, it is of course advisable to

relieve it, if possible, without having recourse to the catheter, and it is perhaps the only case in which we need endeavour to do so; for the old doctrine, that in retention of urine we should employ the catheter only as a last resource after all other means have failed, has been long since exploded. We shall usually find that an opiate administered per rectum, together with the use of a warm bath, will relieve the retention of urine arising from the cause now mentioned; should it, however, fail, we must employ mechanical means; but in general it will be sufficient merely to pass a bougie down to the stricture, and keep it pressed against it for about a minute, which procedure will relieve the spasm, and the urine will flow. If this method prove ineffectual, the only alternative is, of course, to pass a catheter into the bladder. Now when we are called upon to pass a catheter for the relief of retention of urine arising from stricture, no matter under what circumstances it may occur, we should not, as is often done, commence by using a metallic instrument, and endeavour to pass it by force through the obstruction; for, if we fail in effecting our purpose, we are certain to increase the spasm and thereby diminish the chance of further efforts succeeding, and, besides giving severe pain, we may cause bleeding, and injure the lining membrane of the urethra, if not produce a false passage. We ought to observe the very reverse of this censurable plan. We should select a gum-elastic instrument, whose size does not exceed that of No. 3 or 4, and making the patient stand in the erect posture, we should introduce it without a stilet. Unfortunately there is very commonly a fold at the neck of the bladder in strictures, particularly those of old standing, in which case we may be unable to pass the kind of instrument recommended fairly into the bladder, as that which, by its size, is best suited to pass through the stricture, is ill-designed to surmount the fold that lies behind it. However, it is not always necessary to introduce an instrument into the bladder to relieve retention of urine, for if we pass it through the obstruction, and carry it into the prostatic part of the urethra, we shall often be enabled to draw off, if not all the fluid, as much at least as will remove the present urgency. This plan is chiefly successful in cases where the urethra is dilated behind the stricture, and in fact it is, in most instances of the kind, the only means by which the bladder can be emptied, because, in consequence of the dilatation, the entrance into the bladder lies considerably above the level of the posterior part of the floor of the urethra, so that a small instrument which has passed through the stricture will hitch below the point of opening into the bladder. If we fail in relieving the retention by this means, we may then try a larger gum-elastic instrument with a stilet; and if we be foiled with it, we must try the metallic catheter, which, under particular circumstances, may succeed when the others have failed. If we commence with the small gum-elastic catheter in the manner suggested, though we may not succeed in some cases, we do no mischief, and we have the other means still at our command; whereas if we have recourse in the first instance to the large metallic instrument, we are apt to inflict injury, and thereby remove all chance of relief to the suffering patient, save by one of

those means of gaining access to the bladder, the simplest of which involves a serious operation.

[Passing over the author's remarks on abscess in perineo, we come to infiltration of urine.]

Infiltration of urine, which has an undoubted claim to be considered the most serious consequence of the use of instruments for the cure of stricture, is, happily, the least frequent, and is, with very few exceptions, attributable to unjustifiable violence upon the part of the surgeon. The instrument acts only remotely in producing this serious result, either by leading to the formation of a true urinary abscess in the manner above described, or by exciting inflammation and ulceration behind the stricture, which are apt, under certain conditions, to terminate in rupture. The subject of infiltration or extravasation of urine is a wide one, involving much detail, and as there is nothing peculiar in that which follows the cause here noticed, to enter at length upon its consideration would be unnecessarily swelling the pages which contain the few foregoing observations.

The above remarks present but a brief account of some of the ill-effects of the employment of the bougie for the cure of stricture; and though we may naturally feel surprise that a plan of treatment apparently so simple should be capable of leading to results so grave, this very circumstance renders it the more incumbent upon us to endeavour to acquire the highest perfection in its manipulation; for while, no doubt, most, if not all, of the sad consequences now detailed, may sometimes occur from the employment of instruments in the most practised hands, directed by the most judicious skill, still they are not unfrequently attributable to carelessness, or want of proper manual dexterity in the surgeon.

ART. 50.—*On Permanent Involuntary Contraction of Muscles, with a simple Mode of Treatment.* By SAMUEL SMITH, Esq., F.R.C.S., Surgeon to the Leeds Dispensary.

(*Lancet*, Sept. 20, 1851.)

[The rationale of the lesion referred to, and its mode of treatment, first occurred to the author from experiencing it in his own person.

The first case reported is that of—]

Mary L—, a robust woman, who was admitted a patient of the infirmary, under Mr. Smith's care, on the 30th of July, 1820. She had been fifteen months under treatment, suffering much during the whole time from permanent involuntary contraction of the four powerful muscles forming the quadriceps extensor femoris, the whole of which were in an extremely rigid state. She walked without pain, but an inability to bend the right knee in the least gave her the appearance of walking with a wooden leg; and during the whole of this time she had been unable to kneel. The warm-bath, fomentations, frictions, and many other means, had been persevered in for a great length of time without producing the least effect upon her complaint. In reflecting upon this case, the author thought this state of the muscles had originally been produced from some such cause as his own case, and that it was

now continued by the force of habit. He also thought, if he could succeed in completely relaxing these muscles, and keep them in that state a few hours, the balance of power between these muscles and their antagonists, the flexors might possibly be restored, and thus a cure effected. He proceeded to try this plan the following morning. He placed her upon the bed on her left side, and taking hold of the ankle with his right hand, grasping the thigh with his left, in the course of about ten minutes succeeded in drawing back the heel, and pressing it against the buttock, thus producing a perfect flexion of the limb. This was not accomplished without considerable management, for the muscles made many attempts to overpower his efforts; but by gentle friction, and perseverance, the object was at last gained. It was gratifying to perceive that the rigid muscles became now perfectly relaxed. In order to destroy the tendency to reaction, two leather straps with buckles were placed, while the limb was in this position, tight round the upper part of the thigh and ankle, thus fixing the limb in this position, with the heel touching the buttock. She remained bound in this manner, and lying upon her side, until the following day, upwards of twenty-four hours. The success of this practice was perfect. On being released it was found the muscles, which had been for so long a period contracted, were quite relaxed; and not only so, but the tendency to involuntary contraction was entirely destroyed. She walked without limp, without pain, and with the perfect action of the hinge of the knee-joint during every step she took. Suspecting, however, it might return, she remained an in-patient ten days. No return of the complaint took place. She was made an out-patient, and appeared as such.

Oct. 4, 1846.—The author received a letter from the late Mr. Spink, requesting him to meet him in consultation, on a case at Tollstone, near Tadcaster. He found Master S—, a fine boy of seven years of age, had been twelve days confined to bed and the sofa, in consequence of a blow he had received on the body from a playfellow at school. Considerable pain took place, he was put to bed, and the usual remedies applied. When seen he was lying on his left side with the knees drawn towards the abdomen, he was in much pain, had been twelve days quite unable to put his foot to the ground, or alter the position of the foot without acute pain; and it was suspected that there was some acute disease of the hip. After examination, finding some of the abdominal muscles and also those of the thigh in a painfully contracted state, the author rubbed them, and, by gentle means, gradually brought down the thigh; he then gently pushed back the chest, and in five or ten minutes he ascertained that the painfully contracted muscles were relaxed and also at ease. He now took the patient in his arms, and placed him on the floor with the left leg foremost; ascertaining that in this position the muscles still remained relaxed, he left hold of him and confidently requested him to walk;—to the great surprise of his surgeon, and gratification of his father and mother, he walked well, and at ease, without limp or lameness. The cure was immediate and perfect, and no relapse took place.

[The author continues:]

Whatever muscles we find in this state, let it be our object to

place their origin and insertion as far apart as possible; this secures a relaxed condition of them; maintain them in that state for some time, their opponents will then be gaining strength, and the balance of power will be restored. The author states that he has often seen the masseter in this state, and cures it by the gentle insertion of a wedge into the mouth. It is this state of the sternocleido mastoideus which forms wry-neck, and he has several times succeeded in effecting a cure in recent cases by turning the chin to the opposite side, and keeping it there a few days by mechanical means. The muscles about the shoulder-joint often get into this state after accidents, and render the arm of very little use for months, and sometimes for years. This state of the shoulder he has often cured by the same manœuvre formerly mentioned, placing the bend of the elbow on the crown of the head, with the fingers touching the ear on the opposite side, and keeping it in that position a few hours. The biceps sometimes remains for some weeks in this state after treatment for fracture of the forearm; the muscles of the fingers also, after injuries of the hand. The powerful extensor or flexor muscles of the thigh after long-continued, extended, or bent position of the limb in the treatment of fractures or other injuries, are left in this condition. The gastrocnemii and other muscles of the leg are often allowed to get into this state during the treatment of diseases or accidents of the foot or ankle, and often require more management and time to remedy it after the cure, than the original disease.

SECT. III.—NATURE AND TREATMENT OF SURGICAL DISEASES.

ART. 51.—*On the Treatment of Stricture by External Incision.* By JAMES SYME, Esq., Professor of Surgery in the University of Edinburgh.

(*Edinburgh Monthly Journal*, June 1851.)

Strictures of the urethra may be divided into three classes. First, those in which there is no real organic contraction of the canal; second, those in which the contraction admits of dilatation, and may be prevented from returning by the use of bougies; and thirdly, those which either resist attempts to effect dilatation, or return so quickly after its completion as to prevent any permanent advantage from being derived by the patient.

The first class is very numerous, in consequence of the various and frequent circumstances which, independently of contraction, tend to impede the flow of urine. Hæmorrhoidal affections, and fissure of the anus, enlargement of the prostate, paralytic states of the bladder, disorder of the digestive organs, sexual excesses, and an irritable state of the urethra, with many other derangements of a functional and organic kind that might be mentioned, are apt to occasion, more or less, uneasiness in micturition, and excite the suspicion of stricture.

The introduction of a full-sized bougie would of course correct any such erroneous impression, but, unfortunately, cannot always be accomplished, even though there is no obstruction, through want of practice in the use of instruments, and morbid sensibility on the part of the patient. Both he and the practitioner are thus apt to be confirmed in their mistake, and led to enter upon a course of treatment not only altogether unnecessary, but frequently very injurious. It is in these imaginary strictures that various means of remedy have acquired any credit they possess, such as, of course, all those employed externally, or through the medium of the system; and also many others of a local kind, which could not be mentioned on the present occasion without giving offence to their respective authors or advocates, and therefore may be passed over in silence, since they never can be of any practical utility *to the patient*. At the same time, Prof. Syme thinks it right to protest openly and distinctly against any evidence drawn from this spurious source, being admitted into the discussion of what may be done with most advantage for the treatment of real organic stricture.

The dilatable form of this disease may be remedied in many different ways, through the use of bougies and catheters, flexible or rigid, and introduced occasionally, or retained permanently during the period of treatment. While it cannot be denied that the object in view may be attained by any of these modes, there is as little doubt that they cannot be all equally beneficial, or free from inconvenience; and when they are compared together, with regard to their qualities in these respects, the author thinks there should be no hesitation in giving a decided preference to the metallic bougie, employed at intervals of from two to four days, and withdrawn each time immediately after being introduced. This method, which he complains has been characterised by one of the London writers as "*frivolous*," affords, in his opinion, the certain means of dilating any dilatable stricture in the course of a few weeks, not only more easily and safely than any of the other forms in which pressure is employed to widen contractions of the urethra, but also with a greater degree of lasting effect, since it appears that the more slowly the process of dilatation is accomplished, the less rapid is subsequent relapse.

The third sort of stricture fortunately bears a small proportion in frequency to the one last mentioned, but it does not do so to the same extent at all parts of the urethra. It is between two and three inches from the orifice, and just before the bulb, that organic contractions are chiefly met with. Tight strictures are much more frequent in the latter than the former of these situations, but when they do occur in the anterior part of the canal, are more apt to prove obstinate than those of the posterior position. Thus, of twelve tight strictures, the proportion may be about three in the anterior, and nine in the posterior situation, and in each of them *one* of the obstinate kind. Prof. Syme has in his possession a letter from the late Mr. John Pearson of London, to the late Dr. John Thomson of Edinburgh, which affords a remarkable illustration of this pathological fact in the following extract:—"London, September 26, 1804,—I have lately had under

my care a case of impermeable stricture, about two inches from the meatus urinae. Being foiled in every attempt to open it, I dissected down to it, cut through the contracted part, which was as hard as cartilage, and the wound is now very nearly healed. The patient makes water in a perfectly good stream. I yesterday saw a similar case, and intend to operate on it on Thursday."

In this obstinate form of stricture, there is not only contraction of the canal, but also a remarkable thickening of the part affected, which consequently is in general distinctly perceptible through the integuments, being felt like a ring of firm consistence, and flattened form. The bougie when introduced is firmly grasped, so as to be withdrawn with difficulty, and the patient, so far from experiencing relief afterwards, usually suffers an aggravation of his distress. It is difficult to account for these differences from the cases of ordinary occurrence, or to explain the origin of a disease so peculiar in its characters. The author has not been able to trace any connection between the effect in question, and the cause giving rise to it, or to distinguish any specialty of constitution favouring its production. But that there may be some predisposition depending upon the temperament, or other circumstances of individual limitation, would appear from the hereditary and collateral connection occasionally observed between patients thus affected. A gentleman who was lately under his care for a stricture of twenty-four years' standing, told him that both his father and grandfather had died of the disease. And some time ago, he divided the stricture of a patient who was one of five brothers, three of whom had died of the disease; a fourth, who is now well, had been under his care; and this, the fifth, had run an extraordinary gauntlet of treatment, of which it may be sufficient to mention a year or two passed under the care of Mr. Guthrie, who employed a succession of catheters, and afterwards caustic; a prolonged residence at Gräffenberg, under the water cure; and a trial of Parisian homœopathy, which nearly proved fatal in a negative way, by disregarding an extravasation of urine that took place, all through the scrotum, and over the lower part of the abdomen, and but for the skilful care of M. Cloquet would doubtless have proved fatal. It is a fact of much practical importance that there is seldom, if ever, more than one contraction of the unyielding or resilient kind in the same urethra.

Having frequently had occasion to witness the distress resulting from this form of stricture, and to regret the insufficiency of any known means of remedy, the author had great pleasure in communicating to the profession a safe, easy, and effectual method of overcoming the difficulty, which consisted in dividing the contracted part of the canal upon a grooved director passed through it. The speedy and complete relief thus afforded, even in cases of the most protracted and aggravated suffering, is one of the most gratifying services that can be rendered by the art of surgery. The favorable anticipation originally entertained of it has been more than realised; and any patient who continues to suffer from obstinate stricture, can no longer attribute his wretched state to the imperfection of surgery.

In the present and following papers Prof. Syme proposes to illustrate and confirm the statements which have hitherto been offered in favour of this treatment.

Prof. Syme has represented it as secure against the ordinary dangers which attend operations on the urinary organs,—namely, hæmorrhage, inflammation, and infiltration of urine; and he now appeals to the evidence of forty-four cases which he had thus treated without encountering any of these effects, even in a single instance. It is quite true that through awkwardness, or defective acquaintance with the parts concerned, the artery of the bulb may be cut, and other errors of a serious nature be committed, so that he is not prepared to deny the allegation of this procedure being attended with danger in “inexperienced hands.” But any man of ordinary skill, who chooses to follow the directions which he has given for conducting the process, will find little difficulty in accomplishing it. And here the author remarks, that his commentators who speak of “long incisions” in the perinæum, and laying open the urethra to the extent of several inches, have no warrant for such statements in anything that he has said or written on the subject. He never opened the urethra beyond the extent of an inch, and seldom beyond that of half, or two thirds of an inch.

The bleeding at the time of the operation hardly ever exceeds one or two teaspoonfuls; but occasionally takes place some hours afterwards to the amount of an ounce or two, being apparently proportioned to the hæmorrhagic disposition of the patient, and therefore to be deemed rather salutary than otherwise. If any circumstance should render it desirable to prevent the chance of this discharge, a piece of lint put into the wound at the time of its infliction, will effectually do so.

As to the question of “impermeability,” Prof. Syme simply maintains, that if the urine passes out, instruments may always, through care and perseverance, be got in beyond the contraction. It should be observed, that the case here is quite different from that of a distended bladder requiring *immediate* relief. He has never maintained that in such circumstances the introduction of a catheter was always practicable; and although, in the course of two and twenty years of hospital practice he had not happened to meet with a stricture that resisted this instrument; he neither professes security of being equally fortunate for the future, nor teaches such confidence to others, especially if they are not to be daily practised in overcoming obstructions of the urethra. In his ‘Principles of Surgery’ it is said:—“If the surgeon possesses the requisite tact for introducing instruments into the bladder through the urethra, and has the treatment of the case from its commencement, he will very rarely, perhaps never, be under the necessity of resorting to this puncture. But should he not be able to draw off the water by the catheter, either from his own want of dexterity, or from the existence of obstacles arising from mismanagement or previous organic alteration of the passage, as stricture or enlargement of the prostate, complicated with a lacerated, softened, swelled, and bleeding state of the lining membrane, caused by forcible attempts to pass an instrument, there can be no hesitation in having recourse to the operation. Puncture of the bladder, however per-

formed, is always attended with more or less danger of urinous infiltration; but a doubtful remedy is better than none; and there are few states of disease more hopeless than complete retention of urine, permitted to follow its own course." (p. 359.)

But if sufficient time and opportunity be afforded, Prof. Syme firmly believes, that every stricture may be rendered permeable. He feels deeply impressed with the importance of this principle, and, with the view of establishing it,—not, certainly, to obtain an advantage over his professional brethren,—he has again and again offered to undertake the treatment of any stricture, however impermeable it might be deemed, that was sent to the hospital. All those hitherto received have been afforded complete relief, either by simple dilatation, or by incision after being rendered permeable; and he ventures to hope that the results in future will be no less satisfactory.

With regard to the permanence of effect obtained through incision, in his early communications, the author could only express the expectations which seemed to have a reasonable foundation; but now, with the advantage of seven years' experience, he is able to speak more decidedly on the subject. It is well known that cuts, lacerations, and even slight bruises of the urethra from external violence, are almost sure to occasion stricture of the canal, unless a full-sized instrument be passed occasionally for a few weeks after the injury has been sustained; and he has, therefore, always considered attention to this circumstance essential for success. The first three cases of stricture at the bulb in which division was effected, after being treated in this way, seemed so completely divested of their contractile tendency, that he expected that it would never be necessary to use any precautionary measures by introducing bougies beyond the period just mentioned, immediately subsequent to the operation. In many patients this expectation has been fully realised, but in others it has been found necessary to introduce bougies for a longer time. How far these exceptions may depend upon some imperfection in the performance of the operation, the mode of healing in the wound, irritability of the system, or impropriety in the patient's mode of life, it is not very easy to determine at present, although more definite ideas may probably be acquired from more extended observation. In the meanwhile he feels warranted to state, that if the stricture be thoroughly divided, and a full-sized bougie be passed occasionally for a month or six weeks afterwards, the patient will certainly obtain complete relief from all the distress which attends the obstinate form of the disease, and require at most merely the precautionary treatment which is found sufficient to prevent the ordinary form of stricture from being troublesome. In illustration of what has been stated, the author commences a relation of facts, which are to be continued as long as they seem required.

[The cases alluded to are published in the consecutive numbers of the same journal. As far as they have as yet been detailed, they appear strictly to warrant the encomiums passed upon this operation, by the accomplished surgical professor of Edinburgh.]

ART. 52 — *Treatment after the Operation of Hernia.*

By R. QUAIN, Esq.

(Medical Times, Aug. 9, 1851.)

[The following remarks are consecutive to the narration of some cases which formed the subject of a clinical lecture. In one obstinate case, vomiting was a troublesome symptom. Mr. Quain says:]

After the operation in our cases, reliance was placed on the application of leeches and some doses of opium at first. On the third day, enemata were administered. In the case of the patient who had continued vomiting, advantage was derived, after the use of leeches, from two or three pretty full doses of calomel followed up by enemata. In the management of patients in these circumstances, *i. e.*, after operation for strangulated hernia, sufficient time must be allowed for the recovery of the bowel before any remedy, calculated to excite intestinal action, is given; and the occurrence of peritoneal inflammation is to be constantly and carefully watched for. The necessity of the latter injunction will be understood, when I state, that I have not, during a series of years, seen this inflammation wanting in a single instance of *post-mortem* examination after the operation had been performed. During the first two days the patient must be seen every four or six hours, and a careful person ought to be in charge to report according to instructions given by the surgeon. Bear well in mind, that it is only at the outset that the peritoneal inflammation admits of a successful treatment. It is to be looked for and met as it arises. The best test of its approach is, I believe, the presence of tenderness over the abdomen. When there is any indication that inflammation is arising, leeches are to be applied, and the degree of tenderness taken in connection with the strength of the patient, determines the number to be used. In aged or feeble persons, even a very small number will be of service; on the other hand, I have seen advantage derived from beginning, in vigorous persons, with the abstraction of blood from a vein, and following this up with leeches, where the symptoms indicated further bleeding. This more extensive depletion is, however, seldom necessary in the hernia patients of the hospital.

Opium seems to have a beneficial effect during the first day after an operation. The dose at first is half a grain or a grain, and repeated in smaller quantity at intervals of eight or twelve hours. But in this, as in most other cases, the effect of the drug requires watching. A short time ago, after the operation for strangulated femoral hernia upon a patient of my friend Dr. Darling, I gave twenty drops of laudanum, divided into four parts, and the administration of these was spread over eight hours, with the effect of producing a considerable degree of narcotism, which, however, soon passed off. The patient was an aged and infirm female. Lastly, I may add, that I have not observed the very beneficial effects which have, within the last few years, been assigned to the use of opium in strangulated hernia.

I had been in the habit of combining calomel with the opium, but I discontinued the practice in a great measure, from the belief that griping pains and tenesmus, which I witnessed in some instances, were

caused by that medicine. To any disturbance of the intestine in these cases, there is a special objection in the condition of the strangulated part. In only a single instance do I find it stated in the records of the cases I have operated on in the hospital during several years, that ptyalism followed the use of calomel. When severe peritonitis has come on, we have had recourse, in some instances, to mercury in another form, viz., the mercurial ointment applied over the abdomen, and occasionally to inunction. This practice has, I must confess, been resorted to in compliance with the opinions transmitted to us from our predecessors—a tradition in the profession—rather than from any evidence I have personally had of the advantage of this treatment. When danger presses, one does not feel justified in omitting any remedy recommended by any reasonable authority, even though his own experience would lead him to consider it of doubtful value. A considerable time is allowed to elapse before any aperient medicine is given to our patients. We begin with an enema usually on the third day after operation.

ART. 53.—*Aphorisms on the Treatment of Wounds and Injuries of the Abdomen.* By G. J. GUTHRIE, Esq., F.R.S.

(*Lancet*, April 12, 1851.)

1. A blow on the wall of the abdomen, from any solid substance, causing a severe bruise, often, if not always, gives rise to the absorption of muscular fibre, and the subsequent formation of a ventral hernia. It is desirable, in all such injuries, to prevent or to subdue inflammation as soon as possible, in order to obviate the formation of matter between the layers of muscular fibres, which is a disagreeable, if not always a dangerous consequence. Severe blows or contusions from falls may rupture the hollow as well as the more solid or fixed viscera, causing death. A child just able to walk was placed under the author's care in the Westminster Hospital, having been tossed up into the air by its father with his right hand, and caught in its descent in the crutch formed by the thumb and fingers of the left, on the thumb of which it at last fell. The integuments seemed to be unhurt, the small intestine was ruptured, and the child died. The author has seen all the viscera of the abdomen ruptured, at different times, from non-penetrating blows or wounds, the sufferers usually dying from hæmorrhage.

2. When an *incised* wound is made through the wall of the abdomen, except perhaps in the linea alba, the parts, when vascular, are rarely found to unite in a permanent manner, so that a ventral hernia is the result. The knowledge of this fact, acquired during the war in Portugal and Spain, led Mr. Guthrie first to doubt the propriety of, and when confirmed by subsequent experience, to forbid the introduction of ligatures, through muscles for the purpose of keeping in apposition parts which could not ultimately cohere.

In all simple wounds of the abdomen, of even a moderate extent, the edges of the wound should be brought together by means of a small needle and silk thread, precisely in the manner a tailor would fine-draw a hole in a coat, or a lady a cut in a cambric pocket-handkerchief,

sticking plasters over it, no bandage. The *position* of the patient should be of the gentlest inclination of the body towards the wound, the limbs being bent so that the parts may press against each other. *Absolute* rest is no less to be observed, and steadfastly continued. In the position the patient is placed in he should remain. When Mr. Guthrie became an examiner of the Royal College of Surgeons, the practice of the older surgeons he found there was to purge such patients *vigorously*, in the same manner as they purged persons who had undergone the operation for hernia; against both of which practices he protested until they were condemned and reprobated—improvements the surgery of civil life owes, among many others, to her elder but less fortunate sister, the Amazonian of warfare.

The custom of directing a man to be bled forthwith, as well as purged, because he had been stabbed, was another and not less esteemed error, with the author's older colleagues, which experience did not sanction, and which he could not approve. The abstraction of blood before reaction has begun, after the constitution has sustained a severe shock, delays it, as well as the commencement of the inflammatory stage necessary for the cure of the wound. The abstraction of blood is to be directed and regulated by the signs of reaction which have taken place, and by the augmenting intensity of the symptoms of inflammation which may follow. The quantity required is often large, although too much will do harm. Leeches are very beneficial, and the author has often applied from twenty to a hundred with the greatest advantage.

The *pulse* is by no means a guide to be relied upon, a small, low, and sometimes not even a hard pulse, being more strongly indicative of an overpowering state of inflammation than a quick and full pulse; and much more depends on the fixed pain, the anxiety, and the general oppression, than on the apparent state of the circulation. Long before general and local bleedings cease to be of advantage, calomel and opium will render most important services, particularly the latter.

3. Penetrating wounds of the abdomen are frequently followed by an immediate protrusion of some portion of the contents of the cavity. When the omentum has protruded, it should be returned as gently as possible; the finger should not follow, to ascertain its position; it should be left free from strangulation within, but in contact with the cut edges of the peritonæum, to which it is desirable it should adhere, as they are not likely to unite one with the other. The external wound is then to be sewed up as the author has directed, and the stitches are *not* to be carried through all the intervening parts down to the peritonæum, as is directed by most, if not all, authors whose writings are of ancient and even of modern date.

4. When the opening through which the omentum and intestine, or both, have passed, seems too small to admit of their being returned, the latest writers on this subject recommend that a director should be introduced between the upper portion of the wound and the protruded part, upon which a blunt-ended bistoury is to be passed into the cavity as far as the enlargement of the wound seems to require, when they are to be withdrawn together;—*from all which the author dissents.*

The difficulty does not usually lie with the opening in the peritonæum, but with that in the aponeurotic or tendinous expansions, and it is this part only should be divided. A small cut in the peritonæum is not dangerous; a larger one is, and should always, if possible, be avoided, for however indifferent a quarter of an inch, more or less, may be in a large wound, it is not so in a small one. The protruded parts should be gently cleansed with warm water, with which the fingers of the surgeon should be wetted, and then returned, the mesentery first, then the intestine, and the omentum last. At a later period, if the omentum be found protruded, adherent, inflamed, in a state of suppuration or gangrene, it should be left to itself, and treated in the most simple manner. A ligature should never be applied to it as whole, although it may be applied to a bleeding vessel of any part which has been cut, or which it may be necessary to remove. It should not, however, be spread out in these cases, and cut off, as is usually recommended, as it will gradually retract, and be withdrawn into the cavity of the abdomen, if the patient survive. An omentum wounded in the first instance, is in the best situation when placed just within and against the cut edges of the peritonæum; it is never in a better under any circumstances, except when it adheres to them.

5. When an intestine is protruded, it is to be treated in a similar manner, and the three great directions on this subject, of modern surgeons, are to be *avoided*: do not therefore cut the peritonæum, do not unnecessarily introduce your finger into the cavity of the abdomen, and be most careful to avoid, above all, the third direction, "that the patient is to be placed in such a posture, that the intestines should *least* press against the wound." On the contrary: relax every part, keep the patient perfectly at rest, and if you can so manage, that the intestine shall be steadily applied against the cut peritonæum, without protruding between the edges, so as to be in the best possible situation for adhesion. The external wound should be accurately closed by the continuous suture, supported by adhesive plaster and a compress, and a proper bandage, if it can be methodically applied.

6. When the intestine is wounded, as well as protruded, the case is complicated; a mere puncture, or a very small cut, is not to be dreaded, the bowel should be cleaned and returned, and the excess of inflammation closely watched. When the wound in the bowel is larger, but is less than a third, or not more than a quarter of an inch in length, it is less apt than might be supposed to permit the extravasation of its contents in consequence of the villous coat protruding through the opening in the other tunics, the edges of which being in great part muscular, have separated from each other. This eversion of the lining membrane, so conspicuous in wounds, is not seen in ulcerations, the previous inflammation having solidified the parts. Whenever then an opening in a bowel is not filled up by the internal coat, the edges must be brought together by ligature. A ligature placed around an intestine of a dog, cuts its way through, into the cavity; and if the animal should survive some months, the part which had been injured will not be easily discovered.

When the wound in the intestine is small, and yet larger than it would be safe to leave to nature, a ligature should be applied firmly

around the opening, which should be raised with a pair of forceps, so as to admit of its application. When the wound is larger, the edges should be brought together by the continuous suture in a parallel line. A common needle carrying a fine well-waxed silk-thread, is to be introduced about half a line from the peritonæal edge of the opening, and brought out at the corresponding point on the opposite side, a knot on the end of the thread preventing its slipping. The first stitch should be a line from the end of the wound, and the last should terminate with a knot at a similar distance. The stitches should not be tightened when made, but left loose until all are inserted, when they may be drawn close, one after the other, the cut edges being turned in by a probe, so that the peritonæal surfaces may be in contact under the stitches, the divided edges being turned into the cavity of the bowel. It has been advised not to pass the needle through the mucous coat, but only through the strong areolar tissue connecting it with the transverse muscular coat. It is apprehended that if this could be accurately done, which may be doubted, the ligature might not ulcerate its way through to the cavity of the bowel. It is therefore better to pass the needle through all the coats, until further observations shall have been made on man on this point.

7. When an incised wound in the intestines is not supposed to exceed a puncture in size, or is less than a third of an inch in length, no interference should take place: for the nature and extent of the injury cannot always be ascertained, without the committal of a greater mischief than the injury itself. When the wound in the external part is made by an instrument not larger than one third, or from that to half an inch in width, no attempt to probe, or to meddle with the wound, for the purpose of examining the intestine, should be permitted. When the external wound is made by a somewhat broader and longer instrument, it does not necessarily follow that the intestine should be wounded to an equal extent; and unless it protrudes, or the contents of the bowel be discharged through the wound, in the first instance, the surgeon will not be warranted in enlarging the wound, to see what mischief has been done. For, although it may be argued that a wound four or more inches long has been proved to be oftentimes as little dangerous as a wound of one inch in length, most people would prefer having the smaller wound, unless it could be believed, from calculation, that the intestine was also injured to a considerable extent. Few surgeons, even then, would like to enlarge the wound, to ascertain the fact, unless some considerable bleeding, or a discharge of fæcal matter, pointed out the necessity for such operation; when there would be reason for believing that the patient would have a better chance of recovery, after the application of a suture to the wounded artery, or bowel, than if it were left to Nature.

If the first two or three hours have passed away, and the pain, and the firm, not tympanitic swelling in the belly, as well as discharge from the wound, indicate the commencement of effusion from the bowel, or an extravasation of blood, an enlargement of the opening alone can save the life of the patient, although the operation may probably be unsuccessful. It is not, however, on that account to be always laid aside, when the state of the patient offers even a chance of success

The external wound should be enlarged, the effused matter sponged up with a soft moist sponge, and the bowel or artery secured by a suture. When a penetrating wound, which may have injured the intestine, has been closed by suture, and does not do well, increasing symptoms of the inflammation of the abdominal cavity being accompanied by general tenderness of that part, and a decided swelling underneath the wound, indicating effusion beneath, and apparently confined to it, the best chance for life will be given by reopening the wound, and even augmenting it, if necessary, to such an extent, as will allow a ready evacuation of the contents of the bowel. It is a point in surgery which a surgeon should contemplate in all its bearings. The proceeding is simple, little dangerous, and under such circumstances, can do no harm. Mr. Guthrie has seen instances in which it has been done, and others in which it might have been done, with some hope of its being beneficial; and he recommends it for the serious consideration of those who may hereafter have the management of such cases.

8. When the abdomen is penetrated, and considerable bleeding takes place, and continues, it becomes necessary to enlarge the open, and look for the wounded vessel. If the hæmorrhage should come from one of the mesenteric arteries, or the epigastric, two ligatures are to be applied on the injured part. If it should be presumed that the enlargement of the wound and the search for the wounded vessel is not likely to be effected with advantage to the patient, the wound should be closed by suture, and a compress laid over it. If the bleeding should continue internally, and the wounded part become distended, and tense, the sutures may be in part removed to give relief.

If the belly should become very painful, tense, and manifestly full after a punctured wound, and not tympanitic, the wound should be enlarged to allow the evacuation of the blood, which cannot in such quantity be absorbed. Extravasations of blood of a determinate quantity are not found to be diffused all over the surface, and between the convolutions of the small intestines, provided the person has outlived the period of extravasation, and may be readily evacuated, provided the wound be sufficiently open. It may, when confined, without an external opening, be absorbed, but it is more likely to give rise to suppurative inflammation, and the formation of matter, requiring with it to be discharged by an opening made for the purpose. Cases of extravasation terminating in this manner, are very rare in our northern climate, where inflammation usually runs high in the first instance. That they do sometimes occur should not be forgotten, and that surgery should not be wanting to give its aid.

For the proper treatment of gunshot wounds of the belly the author refers to his work on 'Injuries of the Abdomen,' where it is fully pointed out.

ART. 54.—*Treatment of Internal Hæmorrhoids.*

Dr. I. P. Garvin has recently published a very interesting paper, in which he states that he has treated a considerable number of cases of internal hæmorrhoids, some of them very severe and of long standing, by the use of cold water in the following manner:—He directs about a gill of cold water to be thrown into the rectum immediately before *every attempt* to evacuate the bowels, and that this enema be retained several minutes, if possible. This usually produces an evacuation of the fæces, which have been so far softened on their surface, as to permit their escape without the least straining or irritation. After every evacuation, it will be proper to use ablutions of the parts, more especially in such cases as are attended by some protrusion of the bowels. The treatment is to be continued until some days after all uneasiness is removed. In old or very severe cases, to effect such amendment generally requires several weeks. It is highly important to impress upon the patient the absolute necessity of perseverance in the use of cold water, even though he should be so far relieved as to feel *almost* well, for if it be suspended too soon, a very slight cause will bring on a relapse. So decided is the relief afforded by this treatment, that few persons would be disposed hastily to abandon it, but for the inconvenience of applying it daily. The ordinary apparatus for enemata are so unwieldy, that they cannot be carried about conveniently. All difficulty from this source may be obviated by the employment of a small pewter syringe with a ring handle to the piston. One which will hold two ounces is very convenient, and may be carried in the pocket when necessary. When such enemata of cold water fail to procure sufficient alvine evacuations, the quantity of fluid may be increased to half a pint, or it may be necessary to resort to mild laxatives. Active purgation must be carefully avoided. The patient should be advised never to aid the natural expulsive action of the bowels by straining.

Southern Medical and Surgical Journal.

ART. 55.—*Treatment of Internal Strangulation of the Intestines.*

By R. ROBINSON, M.R.C.S.

(*London Journal of Medicine*, July 1851.)

[The following observations occur in an elaborate paper on ‘Hernia and Intestinal Obstruction,’ which is analysed in our Reports on ‘Medicine and Surgery,’ in the present volume under the *articles* “Internal Obstruction,” and “Hernia,” and to which we refer the reader:]

In the treatment of internal strangulation of the bowels, the following indications present themselves. 1. To open the bowels. 2. To subdue inflammatory action. 3. To support the strength. 4. To remove the obstruction.

1. *To open the bowels.*—As constipation is one of the most constant, and earliest symptoms, to relieve the bowels is the earliest indication

and thus may be attempted,—*a*, by purgatives; *b*, injections; *c*, the warm bath; *d*, nauseating remedies; *e*, bleeding.

a. Purgatives.—Great judgment is required in the selection of purgatives, as if they fail they do much mischief. Had I grounds for suspecting intestinal obstructions, I would give one full dose of Calomel to liquefy the motions, and follow it up by drachm doses of Sulphate of Magnesia. If this did not succeed, I would rub croton-oil on the abdomen, or try one drop internally. Failing with these I would give up purgatives altogether.

b. Injections. Purgatives failing to procure action from the bowels, recourse is naturally had to injections, which should, in the first instance, consist of the compound extract of colocynth, dissolved in water; but when a tympanitic state of the bowels occurs, turpentine, or the tincture of assafoetida is to be preferred. So far, however, as my experience goes in these cases, injections avail but little; and I shall hereafter relate a case where seventy-two injections were administered without any apparent beneficial result.

c. The Warm Bath is a remedy which it would be very proper to use in the earlier stages; but, as the disease advances, the strength of the patient being much exhausted, would scarcely justify its trial. Fomentations, often useful, and always soothing, should be used in all cases, especially where there is pain.

d. Nauseating remedies, in a strong and robust individual, might deserve a trial. Of these, perhaps, the two best are tartarised antimony, and the tobacco injection; but I should not be very sanguine of obtaining success by their means.

e. Bleeding may be now and then resorted to in the earlier stages, in the robust and plethoric; but bleeding, carried to any great extent, I consider objectionable, for reasons to be stated hereafter.

2. *To remove inflammation* is a point to which particular attention should be directed; and, perhaps, there is but one thing of more consequence than this, for if it be allowed to go on unchecked, it may destroy the patient; and yet, if too vigorously attacked (by reference to the cases it will be seen that, in some, it was entirely absent, and, in almost all, limited, and by no means severe,) the patient may sink from other causes. I think, therefore, that general bleeding will seldom be called for on this account; the application of leeches, fomentations, and the administration of small doses of calomel and opium, will be all that is required for removing or controlling peritonitis brought about by this cause.

3. *To support the strength.*—I am very anxious to lay great stress upon this point, because I do not think it has been sufficiently attended to in practice; and I feel sure that patients have been largely bled, who would have had a better chance, had the vital fluid been less unceremoniously abstracted. If the bleeding be not sufficient to effect its object, either by opening the bowels by its depressing effect, or by removing the peritonitis by its antiphlogistic power, it must, if carried to a great extent, do infinite harm, as it will tend to depress the vital powers, already at a low ebb, and thus take away, I may say, every chance, either from the efforts of nature, or the resources of art. In the absence of fever, and where the stomach would allow of it, I

would give, from time to time, barley-water and chicken broth in small quantities. Where there is great restlessness and want of sleep, and where I had failed in the use of purgatives, and determined no longer to administer them, I would certainly advise the administration of opium, as, by so doing, I should hope to tranquillise the nervous system; for nothing tends to exhaust the frame so much as long-continued nervous irritability; and cases are on record showing the good that has been done with it occasionally. If I employed opiates, I should prefer solid opium to every other form,—first, as being more likely to be retained by the stomach; and secondly, as possessing a stimulating as well as sedative property, which, I think, would, in these cases, be decidedly advantageous.

4. *To remove the obstruction* is one of the most important and difficult questions connected with this subject, and one upon which much difference of opinion exists. It is clear that this can only be done with certainty by means of an operation; and two cases have lately occurred, in which encouragement has been given to this plan. In one of the cases (Mr. Hilton's), the bowel was so far liberated, that the intestinal contents passed through the obstructed part. In neither of the cases, however, did the patient long survive. In considering this subject, four points are to be entertained: A, the likelihood of finding and removing the obstruction; B, the place of performing the operation; C, the time at which it should be undertaken; D, the chance of success that may attend the attempt.

A. *The likelihood of finding and removing the obstruction.*—Upon this point, there can be no doubt that there is great uncertainty; for although, in both the cases to which I have alluded, the obstruction was detected and removed, yet in one (Mr. Hilton's case) very considerable difficulty was experienced; and in case xvi, had an operation been undertaken, the incision would, in all probability, have been made to the *right* of the umbilicus, as a decided induration was evident there, and not elsewhere, and a pouch immediately above it. It was natural, therefore, to suppose that this was the point of obstruction; whereas, on dissection, this proved to be merely hardened *seybala*; and the fatal incarceration was situated in the upper and posterior part of the *left* side of the pelvis.

B. *The place of performing the operation.*—Mr. Phillips says: "There are some cases where the seat of obstruction is so clearly indicated, that *no doubt* remains. In such cases, I apprehend the rule is evident,—the incision should be made as near as is prudent to that point. But supposing the point of obstruction to be only obscurely marked, or indeed not discoverable at all, then I consider the incision should be made on the median line, because an opening in that situation may be found most convenient for liberation, if that be practicable; or, for the establishment of an artificial anus, supposing liberation of the intestine be not accomplished." The case, however, to which I have just alluded, induces me to think the central incision, as recommended by Dr. Crisp, preferable in all cases where the obstruction is seated in the small intestines.

C. *The time at which an operation should be undertaken.*—It is very difficult to lay down any decided rule for this. Mr. Phillips says, that

interference by surgical operation is justifiable when three or four days have passed without any relief from the bowels by ordinary means, providing constipation be complete, and faecal vomiting continue. I scarcely think we are justified in operating so soon; partly because persons have recovered from constipation of twenty-three days' continuance, and partly for reasons which will appear in the sequel.

D. *The chance of success* I regard as a very important consideration before undertaking any operation; and I cannot think that cases of internal intestinal obstruction, even under favorable circumstances, offer much chance of a successful issue from operation.

In the cases to which I have referred, it has been said, that, had an operation been performed earlier, a different result might have been obtained; and no doubt, in both cases, delay was caused by the unwillingness of parties interested to give their consent. Can that be a matter of wonder, when it is recollected, that if an operation be undertaken, both the patient and surgeon must be prepared to go *all* lengths? The obstruction may *not* be at the part suspected; it may be *some way* from where the operation was commenced, and a *very large abdominal section* may be required to complete the operation; and it may possibly not be completed at all. How can this be undertaken without very considerable risk? How can such an operation be *proposed early*? And how can any better justification be urged for such a proceeding, than that long since advanced by Celsus: "*Satius est anceps remedium experiri quàm nullum*?"

If it be true, that great difficulty attends the finding these obstructions, and great danger follows the attempt at removing them by the knife, so that we cannot conscientiously recommend it but as a forlorn hope, it is but reasonable to inquire, whether any other expedient can be resorted to for a similar purpose. And this naturally induces me to ask whether nature ever produces a cure, or whether spontaneous relief is ever obtained? Several cases are on record, where persons with the symptoms I have described, and to all appearance, sinking from internal obstruction, were suddenly relieved in the bowels, and gradually recovered. A case is alluded to by Mr. Cooper where this happened. An elderly lady, residing at Norwich, was under the care of Mr. Colman, suffering from constipation of the bowels, having had no evacuation for four days. The usual purgative remedies were prescribed, but without effect; enemata and more drastic cathartics were tried, but still ineffectually; vomiting and immense distension of the abdomen supervened; the symptoms became more and more urgent, and on the twelfth day from her attack she had had no relief from her bowels. Dr. Alderson was then called in, and asked *what purgative* he would recommend; to which he replied—"None; but a large dose of opium." It was given, and *in a few hours* the bowels were freely opened, and the patient recovered.* What was the precise condition of this lady must ever be open to doubt; but I venture to suggest that this might have been a case where the bowel was strictured by false membrane, that inflamma-

* Medical Gazette, vol. xlii, p. 608.

tion and ulceration of this band ensued, and that then the gut was liberated; and I feel convinced that, had the patient lived a little longer, it would have entirely given way, and the patient might possibly have recovered. It is this conviction which makes me lay so great stress upon keeping up the strength of the patient; for as newly-formed parts are less organised than those formed originally, there is a hope, if the strength of the constitution be kept up, that the band may give way before the bowel, and the patient's life be saved. It is from this case that I particularly recommend the renewal of the old plan of metallic mercury; I think its use has not been rightly understood. That it will remove on introsusception, or enable a portion of bowel to be drawn out of these bands, I agree with Mr. Hilton, is not at all likely to happen; but that it might in favorable cases (Mr. Hilton's was not one of that sort), by exciting a pressure upon the bowels, break through a false band I verily believe; and I am more strengthened in this idea by the good that has occasionally followed its use. I have heard of a case, which I believe was of this kind, where metallic mercury appeared to remove a very obstinate constipation, and the patient recovered; and my friend Mr. Lawrence, of Brighton, has mentioned to me, and kindly allowed me to make public, the two following instances, which are cases in point. In one, a boy, æt. 10, was seized, without any apparent cause, with constipation of the bowels, but with no sign of inflammation. He was bled, leeches, took drastic purgatives, and had seventy-two clysters administered. On the twenty-first day of the disease, no motion having been procured, ʒiij of metallic mercury were swallowed; no effect following, the same quantity was repeated on the twenty-third day, after which he felt great weight and pain in the abdomen, and voided with much forcing, an immense quantity of fecal matter, and all the mercury, minus ʒss ; almost fatal syncope followed, but the boy eventually recovered.—The other was a case of similar kind, of shorter duration; it occurred in an elderly lady. All purgatives proving unavailing, two doses of metallic mercury, of ʒiv each were given; several motions (and all the mercury, minus ʒj) followed its exhibition after six hours, but the exhaustion and the depression occasioned were such as to destroy the patient. For these reasons, I think metallic mercury again worthy of a trial; it *can* do no great harm, and *may* do good. That it will often fail, I have not the least doubt, especially where the obstruction is low down, and has been so great as to ulcerate or destroy the coats of the bowel; but where, on the contrary, the band is thin, and high up in the canal, where the constriction is not so great as seriously to engorge or injure the part constricted, where the system does not sympathise much with the local malady, and where the powers of life remain vigorous, I am not without hope that it may *occasionally* succeed; and if *but one case* should occur in which, from what I have said, a trial of this remedy should again be made with success, I shall consider my observations not altogether out of place, and I hope I may with truth be permitted to say—"Est quiddam prodire tenus si non detur ultra."

ART. 56.—*On the best mode of performing Amputation at the Hip-joint.*
By Dr. VAN BUREN.

(*New York Journal of Medicine*, July 1851.)

[After relating a case of diseased femur in which amputation at the hip was ultimately required, the author expresses his opinion that rapidity of execution is absolutely necessary to success. He contrasts the modes as followed by Malgaigne, Larrey, Liston and Fergusson, and being unsatisfied which was the best, he determined to experiment for himself on the dead body, as to the mode on which the thigh could be most rapidly disarticulated. The result he thus describes:]

The patient, already under the influence of chloroform, being placed on his back upon a table, with the buttocks projecting beyond its edge, the limb to be removed is committed to an assistant previously instructed as to its management,—the other limb to a second assistant, who carries it with the scrotum and penis as far as possible to the opposite side, and who also steadies the pelvis; the external iliac artery is then, at the word, forcibly compressed against the horizontal ramus of the pubes, by the principal assistant; and the surgeon, standing on the outer side of the limb, transfixes it with a straight narrow knife, ten inches long, entering its point about an inch above the great trochanter, grazing the head or neck of the femur, if possible, as it passes in front of it, and pushing it through the integuments near the anus, at a point diametrically opposite to its entrance, cuts out an anterior flap in the usual method, at least six inches in length. Meanwhile the principal assistant, passing one hand into the wound behind the knife, grasps the flap, and with it the artery before it has been divided, and as soon as the division is completed, with both hands carries the flap upwards as forcibly as possible. The surgeon then, slightly kneeling, carries the knife beneath the thigh to its inner side, as in a circular amputation, and placing its heel on the integuments, at the internal angle of the wound, sweeps it firmly across through the tissues on the back part of the thigh, cutting with a slightly sawing motion down to the bone, and joining the two extremities of the first incision. The long knife is then immediately relinquished, and with a large straight scalpel, the femur being forcibly abducted, the capsule of the joint is laid open as near as possible to the acetabulum, the round ligament divided with the rotator muscles inserted into the trochanter, and the fossa at its base, the assistant managing the limb so as to keep these parts successively on the stretch, and the operation is completed.

A large compress or folded towel is then immediately applied to the surface of the posterior flap, by the assistant, who drops the amputation limb, and the arteries are secured in detail. The femoral and profunda, if well commanded, may be left until after the branches of the gluteal and ischiatic arteries have been secured in the posterior flap.

The arteries should be tied as rapidly as security will allow—the flaps brought together with as little delay as possible, and the patient removed to his bed, where, if his condition allow, he should be left entirely undisturbed to recover from the influence of the chloroform.

The author adds a few words with regard to what he believes to be the advantages of this mode of operating. It is nothing more than a modification of Liston's operation with antero-posterior flaps, in which the posterior flap is made by cutting from without inwards towards the bone, instead of in the opposite direction, the disarticulation of the thigh being left to the last.

The disarticulation of the head of the bone, and the detachment of the great trochanter from its numerous connections, is confessedly the most difficult part of the operation ordinarily, and that most liable to cause delay. In the operation by lateral flaps, cutting around the great trochanter, whether affected in making the first flap as by Lisfranc's method, or in the last, as by that of Larrey, is a clumsy process in the most skilful hands. The descriptions of these operations read smoothly enough in the books, but they are far more difficult in execution.

Dr. Mott performed a modification of Larrey's operation by lateral flaps, previously tying the artery in the groin, a measure now generally considered unnecessary. The author has, in years past, repeatedly assisted him in performing this operation upon the subject, but with all his tact in such matters, the superiority of the method was not so striking as to induce him to follow it without further investigation, and he was exceedingly gratified to hear Dr. Mott express the opinion, that if he ever had occasion to repeat the operation, he should adopt the process which he has described.

One principal cause of the difficulty in disarticulation and in the detachment of the trochanter is, that it is generally attempted with the long hip-joint knife, an instrument admirably calculated for making the large flaps by transfixion, but the most awkward possible for cutting out the head of the bone, or around the trochanter. To relinquish the long knife, disjoint the bone, and detach the trochanter with a scalpel, and then resume it to complete the remaining flap, would be a more sensible, but necessarily a tedious plan. It would certainly be better to make the flaps with the long knife, and then to complete the operation with an appropriate instrument.

Both of these advantages are secured by the method described; and moreover, in it there is no necessity, as in the ordinary operation by antero-posterior flaps, of transfixing the thigh so very near to Poupart's ligament, for as the bone can be disarticulated with an appropriate instrument, and always with certainty and celerity, it is no longer required to expose the joint so extensively in the first incision—which is the only object gained by entering the point of the knife an inch below the anterior superior spine of the ilium.

In conclusion the author states his belief, from repeated trials, that the operation described above could be invariably done in less than a minute even by an unpractised hand.

ART. 57.—*On Excision of the Pelvic Extremity of the Femur.*

By R. KNOX, M.D.

(Medical Times, June 28.)

[The remarks of which we give an abstract, were called forth by a discussion at the London Medical Society on a paper read by Mr. Walton; in which discussion, opinions were advanced by leading surgeons which the author thinks erroneous. More particularly the extreme opinion that excision of the head of the femur is unjustifiable under nearly all circumstances, appeared to him most false, and to exhibit this, he gives cases collected by Mr. Walton, after which he proceeds with the following general remarks:]

During the last twenty-five, or it may be thirty years, the attention of surgeons has been directed to the propriety of extracting, through an external excision made for this purpose, so much of the head and neck of the femur as seemed by its presence to maintain, by its carious or diseased state, incurable sinuses, purulent and exhausting discharges, and a condition of the joint irremediable by any other treatment.

In making this *seemingly* bold attempt for the speedy cure of a hitherto intractable disease, surgeons were, no doubt, quite aware, or at least, ought to have known, that the caries affecting the femur was most usually a morbid affection, not confined to this bone, but was a disease affecting simultaneously, in many cases, the pelvic bones entering into the composition of the joint; that the os innominatum, in fact, was quite as liable to constitutional or scrofulous caries as the femur itself; that both are, unhappily, most frequently simultaneously affected, and that the removal of the femoral portion of the disease (the pelvic part being beyond the reach of excision at least, if not of any surgical treatment) by no means warranted the inference, that disease in the pelvic portion would, in all cases, be arrested, and a speedy and safe cure be effected. But practical men were also aware, that the simultaneity of femoral and pelvic caries was not uniform; that a period arrived, sooner or later, in the progress of the disease, when surgical measures seemed indicated; and that an improved operative surgery, based on a more exact anatomy, and a sounder physiology, due chiefly to Mr. Hunter, enabled modern surgeons to attempt and execute operations with success, which in former times were never thought of.

Whilst opinions were in this conflicting state, clearly from a deficiency of facts or materials which alone could decide important questions like these, it was natural for the operative surgeon to say, "in youth constitutional disease of the joints is frequent; such diseases, when left to themselves, but too often terminate in destruction of the limb, or death of the patient. But experience has shown, that when scrofulous caries attacks the extremities of the bones forming the elbow-joint, the removal of the diseased portions of these bones is a comparatively safe and effectual operation, leading to the most beneficial results." From the elbow-joint, on which so many successful operations have been performed, an application of these views was readily made to the ankle, wrist, and other joints, remote from the

trunk. The knee-joint followed as a matter of course; lastly, the shoulder- and hip-joint itself. That objections should be made to rash operations on these large and important joints was naturally to be expected and approved of by the cautious; but we shall find that the objections in the main lay against rash operations merely, and not against those undertaken for the preservation of life or limb.

As the chief object of this memoir is to consider the question of removal of a portion, larger or smaller, of the pelvic extremity of the femur in cases of scrofulous, or as it is sometimes called, constitutional caries, I shall first consider this point alone; in a shorter section I shall venture a few remarks on the excision of portions of the same extremity of the femur, in cases which, whether affecting merely the trochanters, or implicating the joint itself, cannot be so readily included under the same category. I allude, in a word, to caries of the trochanters, neck, and head of the bone, occurring in the adult, at a period when it is presumed the constitutional tendency to scrofulous disease may or must have ceased.

I pretend not to offer any opinion of my own in a dogmatic way; the truth is, that no facts or materials have been collected to enable any surgeon to do so, whatever may be his standing in the profession. "At what stage of the disease of the hip-joint may the operation of removing the head of the femur be performed?" By "head of the femur," I do not mean exclusively the part called the head. Scrofulous caries of the pelvic extremity of the femur is not confined to the head; the pathological condition in question extends, unhappily but too often to the neck and trochanters. Of the co-existing pelvic disease I shall speak presently. In hip-disease, then, it may be found necessary to remove by operation, not merely the head of the femur, but the adjoining portion of bone, the neck, in brief, and the trochanters.

The question I propose here for solution is more complex than will at first appear. It involves two others at least, which it is not my intention to discuss at any great length in this memoir. The first is, in what number of cases of hip-disease, whether the disease be the true morbus coxarius, the scrofulous caries of the bones forming the joint, or the more obscure affection attacking the adult, is pelvic and femoral caries simultaneous? Secondly, how is this simultaneity to be detected? And, thirdly, (for this question also merits the deepest attention from the surgeon,) does the co-existence of pelvic and femoral caries forbid all attempts at operation.

To answer all or some at least of these questions, regard must be had, first, to the local malady, and secondly, to the system at large. I shall endeavour in the course of the following observations, not to lose sight of any of these questions, although it is not my intention to discuss them systematically.

1st. Without pretending to establish any rigorous line of demarcation between caries attacking the adult bone and the constitutional form of disease, known by the name of morbus coxarius, it is nevertheless certain, that when caries attacks the adult it is usually an intractable and incurable disease otherwise than by surgical means, and these must be of a bold character. No constitutional treatment will answer, because we do not know in what the constitution is at

fault. When this form of disease attacks the adult bone, it may and does persist and continue until death closes the scene, thus enabling the surgeon to ascertain, by *post-mortem* examination, that the diseased or carious portion of bone could be covered with the extremity of the finger. The head of a trephine or a red-hot iron applied to the part during life would have saved the patient. That such an occurrence as this might happen even in scrofulous caries I do not doubt, although generally the caries is in such cases much more extensive.

[Cases illustrating this point are quoted from the Memoir of Mr. Walton, as well as from his own experience, after which the author returns to constitutional or scrofulous caries, of which he mentions eight cases of operation for excision. In the first the patient ultimately sank from double psoas abscess. In the second the operation prolonged life for two years. Two other cases were successful. The remainder were fatal, some from disease of other parts, one from secondary hæmorrhage. In conclusion, the author observes :]

I have thus, to the best of my ability, brought before my professional brethren the history of excision of the head and neck of the femur for caries, arising from constitutional or other causes, in so far as it is known to me. I have shown the difficulty of diagnosis, the doubts occasionally involving what to the inexperienced may seem a simple question, namely, the certainty that the head of the femur has abandoned the acetabulum; I have traced some, at least, of the unsuccessful cases to causes over which the surgeon could have no control; and mooted, or brought prominently forward, certain pathological questions, which pathological inquiry has not yet answered. To all these points I beg to call the attention of practical surgeons; and this, in fact, was my chief object in submitting these observations to the public. To Mr. Fergusson is due the merit, by a series of operations unequalled for a judicious boldness, of proving, not merely the safety of such operations, but their comparative measure of success; he has opened up some important pathological questions, which pathologists had suffered to remain in abeyance for many years. These operations, it is true, are not "uniformly successful," nor always "easy of performance;" nevertheless, they belong to legitimate surgery, if I may so say; more extended pathological inquiries, by affording a surer diagnostic, will, no doubt, add still further to the safety of the operation. But they must not, and ought not, to be undertaken rashly, for this it is which has already brought the operation into disrepute.

ART. 58.—*On the Treatment of Dislocation of the Sternal End of the Clavicle.* By JOHN MILTON, M.R.C.S.

(*London Medical Gazette*, Aug. 15, 1851.)

The author observes that the treatment of this accident has been, to a great extent, unsuccessful in the very best hands, and some of our first surgeons have expressed themselves very decidedly upon this point. Sir Astley Cooper, in his work on dislocations, candidly admits the great difficulty there is in obviating the deformity and

weakness which arise from it; he always told his pupils "you are not to expect that the parts, after the utmost care in the treatment, will, in dislocation of either end of the clavicle, be very exactly adjusted; some projection, some slight deformity will remain; and it is necessary from the first moment of the treatment that this should be stated to the patient, as he may otherwise suspect that it has arisen from your ignorance or negligence. You may at the same time inform him that a very good use of the limb will be recovered, although some deviation from the natural form of the parts may remain, in a slight projection of the sternum, or some elevation of the sternal end of the clavicle."

Mr. Fergusson, after speaking of the usual means of treatment, says, "these means, however, combined with keeping the arm steady in a sling, will, in all likelihood, *not* have the desired effect; and moreover the pain which the injury occasions is not so great as to induce the patient to submit to the irksomeness of a continued application of such an apparatus."

Mr. Liston, in his 'Practical Surgery,' says, "difficulty of preserving the parts in their natural situation will always be experienced, and the cure will be slow and imperfect;" and again, in his 'Elements of Surgery,' "but, after the utmost care and patience, there still remains, in almost every case, some projection more than before the accident. The ligaments are slow in uniting, and the union is *imperfect and weak*."

Dr. Knox, in his 'Edinburgh Dissector,' tells us, "the cure is seldom or never complete, a slight projection of the clavicle always remaining even in the most experienced hands."

Mr. Skey says, "to retain it (the clavicle) in contact with the articulating surface of the acromion is always a difficulty. This end, however, will be attained by a firm compress on the articulation, full extension of the shoulder by means of a compress placed in the axilla, and elevation of the entire arm, which should be fixed at the side in a sling."

"In from four to six weeks," says Chelius, "the bandage may be removed; most commonly there remains greater or less displacement, which, however, does not interfere with the motions of the shoulder:" and his commentator, Mr. South, says, "the dislocation of the collar-bone upon the spine of the blade-bone is one of the most tiresome accidents we have to do with, at least in all the cases I have had to deal with, and the injury is not unfrequent, I have never been able by any contrivance to keep it in its place, and have therefore given up attempting to keep it reduced, and only endeavour to keep it at rest so that it may form new connections on the scapular spine."

The author notices that there seem to be only two grades of this luxation; one in which the acromion and clavicle are separated from each other, and one in which, in addition, the coraco-clavicular ligaments are torn, especially the conoid. Here there is much more displacement of the clavicle.

When its attachments are thus loosened and torn asunder, the clavicle rises, a fact which appears to the author to be deserving of the greatest attention, and which he thinks the anatomical connections of this bone forbid us to ascribe to anything but muscular contraction,

for if forced down, and then released from pressure, it again rises. The voluntary muscles, when healthy, seem always to be at some degree of extension, for as soon as one of their fixed attachments is loosened, or brought nearer to the other by displacement of a limb or bone, they immediately contract, and remain so long after any stimulus has ceased to be applied. We see this, he observes, very plainly in many fractures and dislocations, and the muscles of organic life seem to act in much the same way: they are *distended only* by forces foreign to their organisation; *their only power is to contract*.

[Referring to the muscles which act on the clavicle, the author has the following remarks:]

“The clavicle gives attachment by the superior surface of its sternal extremity to the sterno-cleido mastoid; the longitudinal depression on its inferior surface to the subclavius; the anterior border by its sternal half to the pectoralis major; by its acromial third to the deltoid; the posterior border by its acromial third to the trapezius.

“At first view it would appear that when left to the unimpeded action of the muscles, the clavicle must necessarily be drawn down and not up, for while it can only be drawn up by the trapezius and sterno-mastoid, and perhaps through the medium of the cervical fascia by the platysma myoides, it is acted upon below by the subclavius, deltoid, and pectoralis major. Its rising, therefore, seems only explicable on the supposition that the contracting power of the portions of these large muscles attached to the clavicle is weakened by the overstretching they are so violently subjected to. The force which tears through the strong coraco-clavicular ligaments may well tell on muscles.

Where the humerus alone depressed it would not be a very difficult matter to keep the bones in contact, but the contrary is seen in practice, for no skill has as yet proved successful; whereas if the clavicle be forced down towards the humerus, and the latter at the same time elevated, no such insurmountable difficulty is experienced.

ART. 59.—*Unconsolidated Fracture of the Thigh successfully treated by Acupuncture.* By M. LENOIR.

(*Bulletin Générale de Thérapeutique.*)

The rationale of the various plans of treatment which have been adopted, in order to prevent the formation of false joints, consists in the establishment of an inflammatory action in the fibrous tissue situated between the bony fragments, and the consequent secretion of a secondary callus. One of the methods proposed has, in the hands of its inventor, M. Malgaigne, been unattended with success: we mean acupuncture. But the following case, communicated to the Société de Chirurgie by M. Lenoir, proves that this mode of treatment deserves some notice, even although it has not afforded similar results to M. Maisonneuve. Much of the success obtained by M. Lenoir must, doubtless, be attributed to the many precautions observed by him.

Dupéché, a carpenter, æt. 33 years, in falling from a height of

fifty-two feet, fractured his right thigh. He was immediately conveyed to La Pitié, and placed under the care of M. A. Bérard. After fifty-four days of treatment the patient began to walk with the assistance of crutches, when M. A. Bérard, in order to remove a stiffness which existed in the knee-joint, endeavoured by force to extend the motions of this articulation; in one of these manœuvres the neck of the femur gave way, and the signs of fracture reappeared. The broken bone was again reduced, and an immovable apparatus applied to keep the fractured ends *in situ*; at the termination of a month the apparatus was removed, but the fracture had not consolidated, and the patient had himself conveyed home.

Six months afterwards M. Lenoir took him into hospital, for the purpose of employing the treatment by acupuncture; but before trying this plan he used all the means likely to ensure success, and, amongst others, he had him placed on a mechanical bed, so as to maintain complete freedom from motion, even in attending the calls of nature. As the fracture was oblique and the upper fragment very sharply bevelled, and the fragments, by overlapping, occasioned a shortening of about two and a half inches, M. Lenoir had an apparatus for maintaining extension, constructed by a carpenter, a friend of the patient. This apparatus consisted of a sort of long box, nearly in the shape of the limb, and consequently wider above than below, but longer than it; it was about three inches deep, and was composed of three pieces of light wood closely united to one another; of these three splints the external was eight inches longer than the others, which terminated at the junction of the thigh with the trunk; this longer portion had at its upper end a mortise intended to facilitate the employment of counter-extension; to the lower end of this groove a kind of toothed wheel and axle was adapted, to which was applied a catch for the purpose of fixing it. This apparatus, lined with carded cotton, received the limb, the foot being covered with a gaiter of ticken furnished with a foot-strap; by means of this strap rolled round the wheel, extension was made, while counter-extension was maintained by another strap, well padded, passing along the fold of the groin, having the ischium as its *point d'appui*, and its ends fixed in the mortise in the outer splint of wood.

For several days nothing was done except to tighten the straps according as they became relaxed. At last, on the 12th of August, seven months and some days after the accident, M. Lenoir proceeded to insert the needles. At first he introduced four, each being four inches long, and furnished with a head. Their points were directed along the inner surface of the upper fragment, from below upwards; an interval of but half an inch being left between each needle. Contrary to his expectation, and although he passed them in as far as the heads, he met no obstacle to their introduction. This, doubtless, depended on the existence of an interval between the two fragments, the extension effected by the apparatus having reduced the fracture only in the direction of the length of the limb, and not transversely. The four needles remained *in situ* for six days; at first they excited redness of the skin, then a little pus appeared about them, and rendered them moveable; and finally, a slight swelling and pain in the limb

occurred. These symptoms indicating that inflammation had developed itself, M. Lenoir withdrew the four needles; and, after having cleaned them, he reintroduced them higher up, following carefully the direction of the upper fragment, and leaving between them the same intervals as before. The same symptoms followed this second operations; at the end of five days the needles had become moveable, and were taken away; and the inflammatory action now appearing to be sufficient to produce union, the introduction of the needles was not repeated. The inflammatory swelling of the limb was treated by poultices, antiphlogistic diet, and cooling drinks; and when it was subdued, the two surfaces of the fragments were brought into closer proximity by means of small splints placed around the thigh, and tightened by two straps of leather, a practice previously employed by Amesbury. The apparatus was inspected daily, and tightened when necessary. At the end of twenty-three days, in order to ascertain how far consolidation had advanced, the limb was completely uncovered; it was found to have neither got out of shape nor undergone retraction; but when the hand was passed over the seat of the fracture, it still yielded; splints were immediately reapplied, the limb was replaced in its groove, and extension continued. No fresh examination was made until the expiration of thirty-five days from this time, and then the callus was found to be sufficiently solid to justify the removal of the entire apparatus. Carefully measured, the limb was now found to be rather less than eight tenths of an inch shorter than that of the opposite side; the knee-joint was stiff, but the patella was still capable of some transverse motion; the thigh and the upper part of the leg were œdematous, but otherwise there was no apparent deformity at the seat of the fracture, and the callus was not very bulky. Lastly, the coxo-femoral articulation was capable of motion, and the patient was able to raise the limb by the unaided action of the muscles. As an additional security he was advised to keep his bed for a fortnight, after which he walked with the aid of a stick.

ART. 60.—*Excision of the Astragalus, Successfully Performed, for Fracture and Dislocation of that bone.*

[Although the history of fracture with dislocation of the astragalus, requiring the extraction of the bone, has been succinctly written, there are comparatively but few cases on record, so that the following instance by M. Thore ('*Archiv. Générales*,' Mai,) is not without value:]

A young man working in a stone quarry had his right foot crushed by a fall of stones and earth. When first visited the foot and leg were enormously swollen, so that it was difficult to ascertain the nature of the injury. The foot was, therefore, enveloped in poultices. Five days subsequently a gangrenous odour was perceptible, and bullæ appeared filled with fetid sanies. At the external aspect of the foot the skin was sloughing, and a portion of the astragalus projected, and was moveable in all directions.

Two days after the author decided to extract the bone. After

enlarging the wound the bone was seized in strong forceps, and the ligamentous structures being divided it was readily extracted, leaving a large and deep excavation.

The report five days after the operation is, that the appearance of the limb is much improved, the gangrene diminishing, and cicatrization commencing in certain portions of the wound. Several splinters were extracted, and phlegmonous erysipelas ensued, requiring several incisions for the purpose of evacuating pus; but on the subsidence of this the patient made rapid progress.

An examination of the limb was made at the expiration of the year, when the following were the appearances:—Above and immediately behind the external malleolus there was a deep semicircular cicatrix. There was no trace of callus either on the tibia or fibula. The external malleolus is more prominent than the other. The concavity of the sole of the foot was little changed. The foot, which was for a long time moveable in every direction, was at this time quite ankylosed. The patient could walk and even dance without pain and with facility.

Prov. Med. and Surg. Journal, July 23.

ART. 61.—*Removal of the Os Calcis for Necrosis.—Cure.*

(Medical Times, July 19, 1851.)

William Clifton, æt. 10, was admitted into Abraham ward, under Mr. Simon's care, on the 18th of April, 1851, with severe disease of the foot, accompanied by impairment of the general health. His mother stated that, until four months back, the foot was perfectly healthy; that then, without any known cause, it became swollen, hot, red, and very painful; that it was treated with leeches and poultices, purgatives being occasionally given, and that, at first, it improved. A month after the commencement of the disease openings formed, from which there flowed a profuse discharge of pus. The foot continued much the same up to the time of admission, the pain and swelling having undergone no diminution.

On his admission the hinder half of the foot was swollen to, at least, double its bulk, and was of a bright red colour. The swelling extended as high as a line just above the malleoli, but (as it covered these processes) was too uniform to be owing to effusion into the ankle-joint. There were several orifices at different parts of the swollen integuments, from all of which sinuses ran towards the os calcis; and this bone could be felt with the probe exposed to a considerable extent. He had exquisite pain when the foot was moved, or even touched. His health was much affected; he had lost flesh considerably; he was without appetite, had impaired rest, and was feverish and irritable. Warm-water dressing was applied. On the 20th of April an incision was made over the dorsum of the foot where fluctuation was felt; from this a good deal of serum, mingled with blood, and a small quantity of pus escaped; it was found to communicate with the old sinuses. By this incision much relief was given to the

tension of the superficial parts, and the inflammation of the foot rapidly subsided in a great degree.

Mr. Simon then, on making a very careful examination, found that the os calcis was the only bone exposed; that all the sinuses led in the direction of that bone, and that the tenderness was chiefly confined to its coverings. Over the inner side of the foot the skin was healthy, and here pressure could be made without causing pain. Mr. Simon, who, when the boy was first admitted, had feared that at least the whole foot must eventually be amputated, now came to the conclusion, that the calcaneum was the only bone diseased; that this disease was, in all probability, necrosis, and not caries; and that the neighbouring articulations, with the astragalus, and cuboid bone, were in a healthy condition. He therefore determined to remove only this bone, thinking, from the accounts of the few cases which have been operated on in this manner, that the foot, thus preserved, would prove a more useful member than the stump left after amputation beneath the astragalus, or at the ankle-joint; and knowing from experience, that the diseased skin, riddled with sinuses as it then was, would quickly recover itself and heal after the removal of the dead bone. He intended, however, if during the operation he should find the cuboid diseased, to amputate the foot beneath the astragalus; and if this bone also were unhealthy, to amputate at the ankle-joint. On the 28th, Mr. Simon performed the operation. He made a longitudinal incision in the axis of the bone, beginning just above the heel, and extending to the centre of the sole; and from the end of this incision a second one, extending at right-angles directly outwards, passing round the outer margin of the foot to its dorsum; the two cuts together forming the outline of a rectangular flap. By turning up this flap, he immediately exposed the whole outer surface of the calcaneum, and its articulations with the adjoining bones. It was readily turned out from its place, the whole of it being necrosed, with the exception of that part which enters into articulation with the cuboid, and which was sound to a small depth from the joint. The tendo-Achillis had been separated from the bone with its periosteum, and was firmly adherent to the surrounding tissues.

The articulating surfaces of the cuboid and the astragalus were perfectly healthy. Some little new bone had been thrown out, this it was thought advisable to remove where loosened by the eversion of the flap. The wound was lightly brought together, united in part by sutures and strapping, and water-dressing was applied. Only a single arterial ligature was required; the posterior tibial trunk, as well as the plantar branches, and the corresponding nerves having been carefully avoided. The limb was placed on an internal splint, and secured by a roller. Chloroform had been given throughout the operation, anæsthesia having been very readily and completely induced. The boy got well without a bad symptom. A great part of the wound healed by the first intention, and the single ligature which had been applied came away in a few days. The cavity left by the removal of the bone at first served to collect the pus which escaped imperfectly through one of the old sinuses, but after a time the wound,

which had united, gave way at one point, and from this opening the matter escaped freely, so that, by judicious employment of compresses, the cavity was obliterated, the discharge ceased, and all the sinuses healed, the skin resuming in a very short time its ordinary healthy appearance. On the 30th May, six weeks from the date of his admission, he was discharged cured; having been about the ward on his crutches for some time previously, and being able to press his foot firmly to the ground without pain. The absence of the heel bone was not so apparent as might have been expected.

We have selected the foregoing case for publication because it affords a very good example, showing how far that saving surgery may be carried, which teaches us to prefer excision of single bones of the tarsus when diseased, to the sacrifice of the whole foot, or to that still greater mutilation of the body, amputation below the knee.

The only objection to this plan of treatment is the difficulty of diagnosing the exact extent of the disease previous to operation. But that this difficulty may be overcome by a careful and accurate examination has been fully proved, and in these days, when, by the aid of chloroform, the surgeon's knife has been deprived of many of its terrors, and consequently the celerity of an operation has become of secondary importance, the surgeon may, at the time, make certain of the extent of the mischief, and use his knife just so far as may be necessary for the removal of the whole disease.

But very few (some four or five) instances of the removal of the os calcis have been recorded. The results of these, which must be regarded on the whole as very satisfactory, are mentioned in the 'Medico-Chirurgical Transactions,' vol. xxxiii, in a paper on the subject by Mr. Page, wherein he relates also more fully a case of his own, in which he performed this operation with a very satisfactory result, "the boy," he states, "being able to walk, run, and jump with very little impediment, and the foot, for all the uses of a foot, being as serviceable to him as the other."

The method of operation pursued in the present instance, viz., the raising of an outside flap, and the separation of the calcaneum from the astragalus from within outwards, must be considered preferable to that followed by Mr. Rose,—the raising of a posterior flap, and separation of the bones from behind forwards,—seeing that the plantar nerves and vessels are preserved in the former, while in the latter they are necessarily cut through.

The diagnosis of the extent of the disease was, in the present instance, rendered more easy and certain by the knowledge of its nature; for necrosis, unlike caries, is generally confined to a single bone. The same fact also rendered the prognosis more favorable.

We may conclude, then, from the result of this, and other similar cases, that excision of the calcaneum is, in many instances, preferable to amputation of the foot, inasmuch as the motion at the ankle-joint being preserved, and the tendo-Achillis becoming firmly united with the surrounding soft tissues, and thus allowing the gastrocnemius still to act as a powerful extensor of the foot, locomotion is much more easily and perfectly performed.

ART. 62.—*Ununited Fracture, treated after Dieffenbach's plan.*
By R. STANLEY Esq. F.R.S.

(*Lancet*, Oct. 11, 1851.)

[Various measures are recommended for the encouragement of the secretion of bony matter in cases which show an indisposition to solid union, among which may be mentioned, mercury, friction of the divided ends, seton, and lastly, the impaction of some foreign body which shall excite inflammation. The principle of all, with the exception of the first, is the same. The latter method was recommended and practised with great success by Dieffenbach. It consists in driving ivory pegs into the fragments of the bone, the irritation caused by their presence inducing the throwing out of callus. Dieffenbach was led to adopt this method from observing that a bullet lodged in bone occasioned copious ossific deposit. Mr. Stanley's case is as follows:—]

Abraham B—, aged 24, a healthy-looking countryman, employed in the construction of railroads, and not addicted to excessive drinking, was knocked down by a horse two years before his admission. By this accident he suffered a compound fracture of both bones of the right leg, towards the lower third, and the violence was so great that the upper fragment was forced through his Wellington boot. The patient was placed under surgical care at Slough, and the reduction was effected with much trouble, a whole hour of strenuous efforts having been necessary for accomplishing it. The limb was put up in splints for two months, and in Simpson's patent apparatus for four months, but no union took place, though the wound had readily healed.

The patient now left the hospital to recruit his health in the country; he contrived to do light work in Devonshire, with pseudarthrosis of the leg; and succeeded in lessening the inconvenience of this state of things by making for himself an apparatus composed of iron hoops and a connecting rod. Thus he went on for eighteen months, and was finally advised to apply to Mr. Stanley, under whose care he was admitted, Oct. 7, 1850, two years having elapsed since the time of the accident.

On examination, the fractured portion of the limb allowed of extensive motion, a false joint had been formed, and the patient stated that he felt a grating at every step he took. Mr. Stanley first tried blisters for a month, then splints and various other contrivances, (among which was a casing formed of gum and chalk) for keeping the fragments in apposition; but these were of no avail, and union did not take place. The patient now returned into the country, and after a short stay, during which his general health improved, he was re-admitted.

On Feb. 16th, 1851, Mr. Stanley decided upon driving ivory pegs into the extremities of the fragments, according to Dieffenbach's method. The patient was placed under the influence of chloroform, and a flap of integument over the fracture having been reflected, Mr. Stanley bored four holes with an instrument of the class of drills made for the purpose, two on the upper and two on the lower fragment. Into these holes four ivory pegs were inserted, or rather hammered,

with nearly a quarter of an inch of the peg remaining over the surface of the bone. The flap of integuments was then replaced, and the patient's leg put into a fracture-box.

Inflammation ran tolerably high, suppuration was soon established, without constitutional disturbance, and the pain was very trifling. Three days after the operation a small abscess formed on the upper part of the flap; Mr. Stanley opened it, and a fortnight afterwards something was seen projecting from the wound, and when pulled out it proved to be one of the pegs. The flap now cicatrised, and two months after the operation Mr. Stanley proceeded to remove the remaining pegs, the soft parts having been laid open for the purpose. It was found on examination that the portion of the pegs which had been above the bone was quite unattacked, whereas the part which had been imbedded in the osseous structure had nearly disappeared. (See the annexed engraving.)



Mr. Teale, of Leeds, (who has performed the same operation successfully,) has remarked analogous phenomena respecting the unaltered state of the upper part of the pegs, and the almost complete absorption of the part situated within the bone, the whole peg having pretty well the same appearance as the milk tooth of a child with the fangs nearly absorbed.

On May 13th, three months after the introduction of the pegs, the patient had a sharp attack of erysipelas of the leg; this was arrested by the usual remedies, and a circle of nitrate of silver on the upper part of the limb. The fracture was now found to be approaching consolidation; but Mr. Stanley desired the patient not to use his leg for some weeks, and when the latter began to try the limb, about four months after the operation, the fracture was found perfectly united, firm, and immovable. He continued in the hospital, carefully walking on crutches, for another month, and was discharged in the latter end of July, 1851, with a sound leg, about five months after the operation.

Dieffenbach's method has also been applied by Mr. Bowman, at King's College Hospital, in a case of a very interesting kind. We shall have much pleasure in acquainting our readers with the results as soon as they are of a decided nature.

Before dismissing the subject, we would just mention that acupuncture in cases of ununited fracture has here and there been very successful; and as this measure is not so severe as the *pegs*, we shall quote, from the second volume of the 'Mémoires de la Société de Chirurgie de Paris,' (1851,) a paper by M. Lenoir, of a case of ununited fracture of the femur, in a man thirty-three years of age.

The patient had been fifty-three days under treatment at La Pitié,

and the callus had then been satisfactorily thrown out; but the surgeon, M. Bérard, (1845,) desirous of overcoming the stiffness of the knee-joint after the man was already getting up, subjected it to passive motion, and in one of these manœuvres the callus gave way, and henceforth refused to form again.

M. Lenoir saw the patient four months after the accident. He first resorted to rubbing the fragments, starch bandage, and continuous extension; these means yielded no result after two months' treatment. The author had then recourse to acupuncture, discarding resection of the fragments, the ligature with a metallic thread, and the seton, as too hazardous. The limb was placed in a box, where extension could easily be made. Seven months after the original accident, four needles, four inches in length, were thrust along the internal surface of the superior fragment, and were left six days. Some inflammation was then excited; the needles were withdrawn, put in again a little higher up, and left five days. After this the fragments were approximated, and kept closely connected by little splints placed round the limb, and secured with straps. Extension was made very gently at first, and the surgeon visited his patient *every day* to regulate both the extension and the pressure by the splints.

After twenty-three days some firmness was noticed between the fragments, and in thirty-five days consolidation had taken place. Œdema of the thigh and leg were combated by the proper means for a fortnight; and after careful trials with the crutches, &c., the patient walked out, about six months after the implantation of the needles, with less than an inch shortening.

M. Lenoir justly says: "Wherever the seton is indicated, acupuncture can be substituted with advantage; for the latter acts like the seton, but more gradually, and may be more easily regulated and controlled." Whenever the extremities of the fragments are in a diseased condition, or separated by a splinter, muscle, or a fibrous cord, resection is of course called for. It is strange that M. Lenoir does not make any mention of Dieffenbach's method in the paper of which we have just offered an abstract.

ART. 63.—*Treatment of Chordee.* By JOHN MILTON, M.R.C.S.

(*Medical Times*, July 19, 1851.)

[Mr. Milton, after trying various antispasmodics, has come to the conclusion that none is equal to camphor, in decided doses. Speaking of the *Spiritus Camphoræ*, he says:]

A teaspoonful is to be taken at night in water before going to bed, and *every time the patient wakes with the chordee, let him at once rise and repeat the dose.* In the milder cases, one dose for a night or two is generally enough. In the more severe ones the symptom is generally removed at the end of the second night, becoming, in the meantime, milder and less frequent after each dose. So long as the clap remains bad, I frequently recommend the patient to take a teaspoonful at night, before going to bed, which suspends the chordee till the cure is completed. This plan of treatment also answers well in the bearing-down pains to

which women are sometimes subject in clap; but as here, contrary to what it is in men, these pains are generally worst in the daytime, it is best to use the essence of camphor largely in the medicine they may happen to be taking. It must, however, be taken in full doses. A violent sudden pain like that of chordee, requires an equally powerful remedy, and there is no use in trifling with it. A less quantity than a teaspoonful will not always suffice to abate the pain at once, though it may materially alleviate it; just as a moderate dose of chloroform will lull the acute pain of an operation without rendering the patient insensible to what is going on, while a smaller quantity, in one full dose, produces complete torpor. Now, as a teaspoonful or two may be safely taken, it is best to ensure success at once. In one or two cases it has produced some sickness, and strangely enough, this has been more the case with small doses than with large ones; this was probably caused by something having been previously taken that had in some measure disordered the stomach. At any rate the instances have been too few to make the affair of any moment. I only allude to it here that no one might, by its appearance, be discouraged from giving so valuable a remedy as camphor really is. It is best taken in water, as if dropped on sugar it produces a strong sensation of heat in the mouth.

ART. 64.—*A new plan of Reducing Paraphymosis.*

By M. MERCIER.

In spite of the many proceedings occasionally adopted for the reduction of paraphymosis, the operation is at all times painful to the patient, and disagreeable to the surgeon; M. Mercier, therefore, thinks he is doing the profession a service in promulgating the following plan:—In all operations for paraphymosis, the great obstacle to reduction arises from the fact, that the manipulations, while they compress the glans in one direction, expand it laterally, so that there is equally an obstacle for the contracted and infiltrated prepuce to overcome. Although the infiltration is greater on the inferior aspect of the penis than elsewhere, it is not there that the difficulty lies, but above, on the upper aspect, where the corona glandis rises perpendicularly. M. Mercier's idea is to render the reduction of the prepuce more easy by converting this perpendicular elevation into an inclined plane, in the following manner:—He stands on the right of the patient, placing the index and middle finger lengthwise under the penis and the thumb above, thus making pressure, and, at the same time, forcing his thumb-nail beneath the constriction. With the left hand he then makes a circular pressure over the tumefied prepuce and the fingers below it, at the same time drawing the constricting band further on to the thumb-nail, and causing the glans to glide backwards over the pulp of the thumb. The reduction is thus effected.

Provincial Journal, May 28, 1851.

ART. 65.—*On the Relief of Impassable Stricture of the Rectum by Artificial Openings.* By J. B. CURLING, F.R.S.

(*Observations on Diseases of the Rectum*, 1851, p. 106.)

[In obstructions of the rectum, an artificial opening for the passage of fæces may be made into the colon in the left groin, by the operation commonly called Littrè's; or in the left lumbar region, by the operation known as Callisen's, modified by Amussat.]

"A careful consideration of the advantages and disadvantages of the two operations, leads me to give the preference to the former. I do not ground this conclusion upon the tables of Amussat and Vidal, because I do not attach much value to them. The cases of Littrè's operation are not only limited in number, but in several of them the colon was not opened in the left groin, the division of the peritoneum being the only circumstance in common. Nor do the tables afford information of the period of constipation, or of the extent to which the viscera were disturbed in the operation. Callisen's operation is not only difficult of execution, but the wound is necessarily of large size, especially in stout people. But it is not so much for these reasons that I am indisposed to adopt it, as in consequence of the operation leaving the patient exposed, afterwards, to risks and annoyances, which are in a great measure avoided when the colon is opened in the groin. Thus I find, in the published account of several of these cases, that the artificial anus in the loin had a strong disposition to contract, so as to interfere with the passage of the fæces, and that repeated dilatation was necessary to secure the patency of the opening. It is also extremely difficult to adjust any apparatus, to prevent the continued escape of flatus and fæces; and as the orifice is without the observation of the patient, he becomes dependent on the assistance of others. These serious inconveniences, if experienced at all, are much less so when the aperture is in the groin. The patient can attend to the part himself. The aperture does not show the same disposition to contract, and it admits of being closed by a well-adapted truss. These advantages, so important to the comfort of the patient, are by no means counter-balanced by any increased risk in opening the peritoneum. The operation is easily performed, and as no exploratory attempt is necessary to relieve the obstruction, a very small opening in the peritoneum is sufficient for the object in view. Even Callisen's operation is not entirely free from risk of peritonitis from disturbance of parts; and the magnitude of the incision probably renders the danger to life, from its performance, quite as great as that resulting from the operation in the left iliac region, carefully performed.

"The abdomen may be opened in the left iliac region by a perpendicular incision about three inches in extent, commencing two inches above Poupart's ligament, and an inch external to the epigastric artery. The fibres of the abdominal muscles being cut across, will help to keep the wound open. The peritoneum being divided, the distended colon will immediately protrude at the wound. A curved needle, armed with a silk ligature, being passed through its coats above and below to prevent its receding when emptied, the bowel may be opened for the space of an inch between the retaining ligatures."

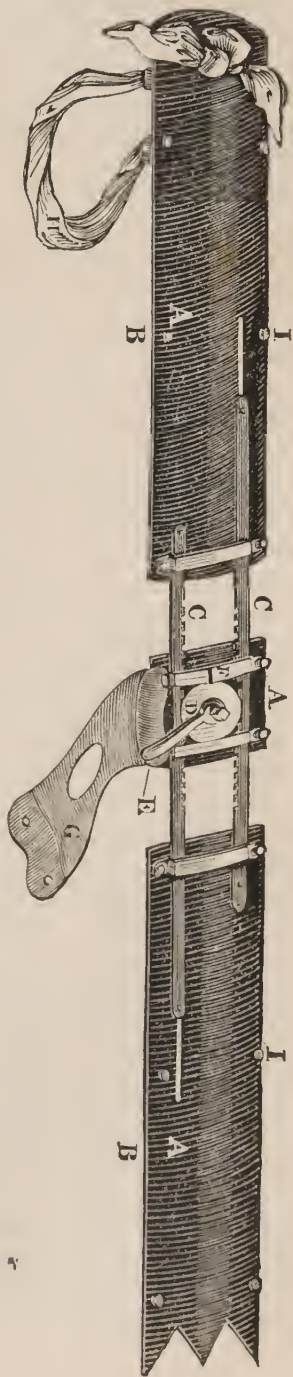
SECT. IV.—NEW SURGICAL APPLIANCES.

ART. 66.—*New Splint.* By Dr. MULLAR.

(Medical Times, July 19, 1861.)

Dr. Mullar observes that a frequent cause of shortened or distorted limbs after fracture, is the difficulty of fixing the splint to the extended limb, and afterwards retaining it in situ. The disadvantage of the ordinary splint is, that if any of the bandages have become loose, either from the subsidence of the tumefaction consequent on injuries of this nature, or from any other cause, it almost always becomes necessary that the whole apparatus requires to be readjusted, and the limb to be extended as at the commencement of the treatment, thereby retarding the process of cure. To obviate this as much as possible, he succeeded in producing the splint, a sketch and description of which is annexed.

The splint is made of hard wood, 4 feet in length, $3\frac{3}{8}$ inches broad, and $\frac{3}{16}$ ths of an inch thick; it is covered externally with very thin sheet iron, to give a proper support to the toothed wheels and rods, which are attached to it. When unscrewed, it is perfectly portable, and of light weight; it is divided into three parts, AAA, the centre short, and the two end pieces long; the notched piece being for the foot, and that with the round holes for the hip, through which is passed the perineal band H; on the centre piece is fixed the toothed wheel, covered by the shield D, which at the same time binds down the two toothed rods CC, thereby keeping them in close contact with the wheel by which they are moved, either to lengthen or shorten the splint. E, the lever handle by which the wheel is moved; F, a small check for fixing the wheel when the required extension has been obtained; G, an elastic belt for supporting the knee; the rods are fixed each with its opposite extremity upon one of the long pieces of the splint, while the other end is allowed to slide in the groove (as shown by a white line at the opposite end of each rod); *iiii* are small buttons for supporting the pad.



ART. 67.—*On a New Apparatus for Fractured Clavicle.* By HENRY LEE, Esq., F.R.C.S. Eng., Assistant-Surgeon to King's College Hospital; and Surgeon to the Lock Hospital.

(*London Journal of Medicine*, Sept. 1851.)

The principal use of the clavicle in man is to keep the shoulder at the requisite distance from the body, and, by affording it an unyielding support, to enable the muscles to move it, and to maintain it in position. When the clavicle is broken, the shoulder falls in, being drawn by the action of the muscles into contact with the ribs. It also falls, in obedience to the laws of gravitation, according to the position of the body. In the erect position, therefore, the shoulder will be found lower than natural, as well as to have lost something of its lateral prominence.

Different methods have been proposed for the treatment of this fracture. The most common method is the figure-of-eight bandage applied about the shoulders. This keeps the two scapulæ on the back of the chest, and prevents their anterior edges from falling forwards. Some degree of extension is made in this way, but still it rarely happens that the fractured extremities can by this means be brought into apposition; and one reason of this is, no doubt, that it affords no provision against the shoulder falling by its natural weight.

A second plan of treatment, which may, with certain modifications, be combined with the former, is that of M. Desault. This consists of a cushion, in the shape of a wedge, placed in the axilla, with the broad part upward. The thin point is prolonged so as to reach as low as the short ribs. This cushion is retained in its place by a bandage, and the arm is bound down upon it. The upper part of the cushion thus acts as a fulcrum, the part of the humerus below it as a lever, and the shoulders are by this means drawn asunder. An artificial clavicle is thus formed, while the natural one is being repaired. This apparatus is, however, very difficult to apply, and demands that the patient should be kept at rest afterwards. In a few days, even with the greatest care, the bandage will require to be readjusted, and this necessarily involves a disturbance of the fractured extremities. But the chief objection to this apparatus lies, perhaps, in the circumstance of the cushion resting upon the moveable ribs. As the extending power is always the same, and depends upon the elbow being fixed by an unyielding bandage, it follows, that any motion which is allowed at the point of support, or at the fulcrum, must necessarily be communicated to the free extremity of the lever: and, consequently, in the case before us, would tell upon the fractured portion of the clavicle.

A third plan, which has recently been adopted for fracture of the clavicle, is that which was suggested by Mr. Ellis. It consists in the adaptation of a firm cushion, in the shape of the top of a crutch, to the axilla of the affected side. This rests upon a vertical plate, which reaches nearly as low down as the crest of the ilium. The apparatus is supported and retained in its position by a band extending over the opposite shoulder. Extension is then made by using the arm as a lever, as in Desault's method of treatment; but, as in that, the cushion

which forms the fulcrum is constantly liable to move with the motions of the ribs.

Messrs. Philp and Whicker, of 67, St. James's Street, have, at the author's request, constructed an apparatus, by means of which lateral extension can be made in cases of fractured clavicle from a fixed point. It consists of a backboard, retained in its position by two broad straps crossing over the shoulders, and by a perpendicular plate reaching to the loins, and connected with a band round the waist; a firm cushion is adapted to each axilla, and extends to the front of the shoulder-joint. To the anterior extremities of these, the straps which go over the shoulders are buckled. Each cushion is directly connected with the backboard by means of a steel bar, slightly concave forward, and capable of being extended laterally and fixed in position by means of a screw. When applied, the two cushions are separated to a convenient distance and fitted to the axillæ. The straps are drawn moderately tight over the shoulders, and the elbow of the affected side is connected with the body by means of a handkerchief or bandage. It is advisable also to support the arm in a sling; and this may be conveniently done by passing a broad band from the elbow in front and behind the arm to the opposite shoulder, below which the cushion in the axilla affords a fixed point for its attachment.

The principal advantage of this apparatus consists in its different parts being so connected and adjusted as not to move with the motions of the ribs; for as these are raised, in all their ordinary actions, simultaneously on both sides, any influence which they possess must be exercised equally in different directions; and as corresponding parts of the apparatus are placed upon the two sides of the chest, any tendency to displacement is exactly met and counteracted by a similar tendency from the opposite side. The result is, that although the cushions rest upon the ribs, they yet do not move with the ribs, but afford firm, and comparatively fixed points of support.

A second advantage of this apparatus consists in its not requiring to be readjusted; should the bandage round the body, or the sling which supports the arm become loose, they may be tightened without in any way disturbing the position of the instrument, or the fracture.

A third point of some importance is, that the arm on the opposite side to the fracture is not confined, and the patient may, in ordinary cases, be allowed to walk about as soon as the instrument is properly adjusted.

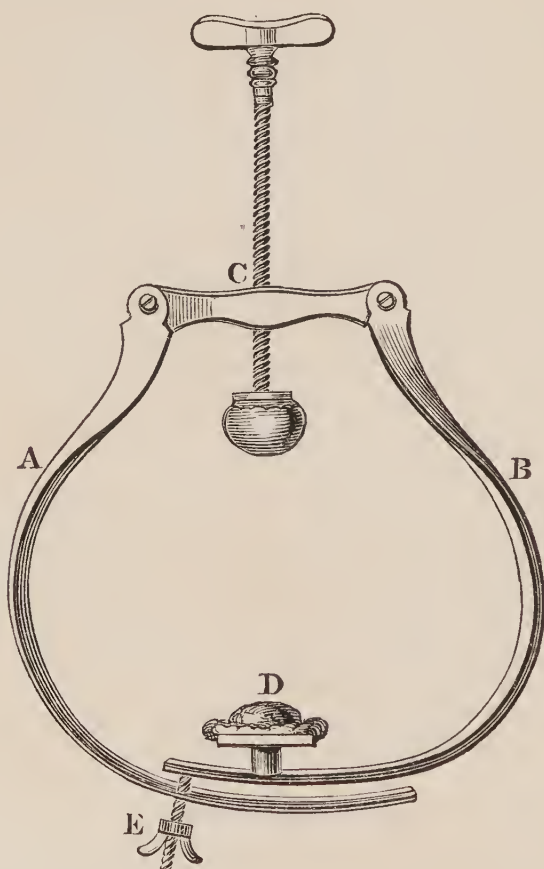
In severe fractures of the clavicle, and in such as are complicated with injury to the ribs, it may become desirable to remove all pressure from the side of the chest.* This may readily be accomplished by increasing the distance between the two cushions, and connecting *both* the arms with the body. Any amount of lateral extension may in this way be made without any pressure upon the ribs, and even without interfering in any degree with their actions.

* It was reported in the case of the late Sir Robert Peel, that he was quite unable to bear the pressure of the ordinary clavicle bandage upon the chest.

ART. 68.—*Improved Circular Tourniquet.* By F. BULLEY, Esq.

(Medical Times, May 3, 1851.)

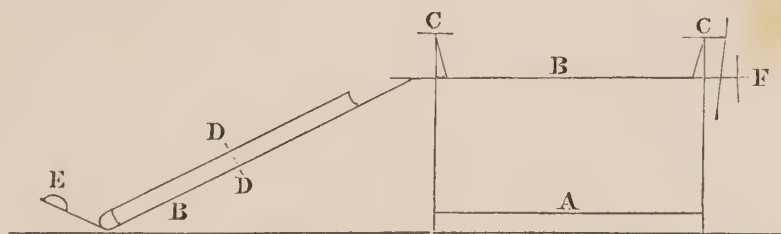
The apparatus, which is figured below, is composed of two semi-circular clips or branches, which are made to open out by means of hinge joints at the ends of the horizontal bar c. Through the centre of this horizontal bar passes a long screw, with a square cut worm; the end of which is made to revolve in the plate of the compressed pad, which latter thus remains stationary, while the screw is working. Near the extremity of the clip A, is a slit in the metal, in which slides the short screw observed in the drawing, which enables the instrument to be enlarged or diminished, according to the size of the limb on which it is to be applied.



The pad D, which also, by means of its stem, moves in a slit in the opposite clip B (to allow of its being placed opposite the compressing pad, under all the circumstances of the diminution or enlargement of the circle) revolves on the short stem on which it is placed, and is raised a little distance from the clip to which it is attached, for the purpose of preventing pressure of any part of the instrument upon the superficial veins.

ART. 69.—*The Sling Fracture-Bed.* By T. M. GREENHOW, F.R.C.S.,
Senior Surgeon to the Newcastle-on-Tyne Infirmary.

Dr. Greenhow having placed in the Great Exhibition a specimen of the Sling Fracture-Bed, which he has employed for many years with great comfort, as he believes, to his patients, he requests the attention of the profession to the advantages which it affords in the treatment of fractures of the femur, especially in the upper third, where in these advantages are most conspicuous because most needed; and in compound fracture of the leg, wherein it secures reduction, and maintains a permanent position of ease, undisturbed even by the most elaborate dressing that can be required in extensive injury to the soft parts. A careful inspection of the instrument will render its application easily understood; but the slight diagram here given may serve to illustrate its leading features.



The stand A rests upon the bed; the splint B is supported by slings from four uprights at c c, and may be raised or lowered at pleasure by the screws at top. The thigh-splint rests on the bed at the ischium, and both behind and at the side can be lengthened or shortened to suit the length of the femur, by acting on screws at D D. A groin and a waist belt, passed through the strong loop E, fix the pelvis to the splint, giving ease and security to the patient, who is enabled, within certain limits, to move the pelvis, so as to relieve the irksomeness of an unvarying position, and for other necessary purposes. The extension of the leg is effected by acting on the screw at F, by which the foot-piece is drawn down gradually, but powerfully, and with the greatest degree of precision. The calf of the leg rests upon a moveable piece of India-rubber cloth, or cross strips of bandage, capable of being most easily removed and replaced, when dressing and cleansing are required; and the outside thigh-splint and loop E can easily be adjusted for either limb. Of course the injured extremity requires to be protected by pillows suitably arranged on the fracture bed.

Lancet, Sept. 20.

SECT. V.—RARE SURGICAL CASES.

ART. 70.—*Remarkable Accident—Impaction of a Large Screw in the Wrist-Joint.*

(Lancet, Sept. 13, 1851.)

[The following interesting case occurred in the London Hospital under Mr. Curling, and exhibits the wonderful resources of nature as resisting and remedying the effects of injury:]

William M—, æt. 37, a lucifer-splint cutter, residing in Stepney, was admitted into the London Hospital under the care of Mr. Curling, on the morning of May 6th, 1851, on account of a large screw, with an hexagonal head, being impacted in the right wrist-joint. The history he gave of his accident was as follows :

The knife used in cutting the splints was driven by a steam engine, of eight-horse power, and worked horizontally backwards and forwards in a fixed frame, there being two screws at the posterior part to regulate its motion. At the time of the accident, his right hand was resting upon the frame, and without his being aware of it, the machinery was set in motion ; as the knife moved backwards, his hand became fixed between the frame and one of the regulating screws, and the motion being still continued, the head of the latter was forced into the joint, and became firmly fixed there, the sensation at the time being that of a dead weight upon the part. His hand accompanied the knife in its motions until the machinery was stopped, and then, after some difficulty, the screw was filed through, the major part being left in the limb. He was placed in a cab and brought to the hospital immediately.

Examination.—The limb supinated. On the dorsal surface of the wrist-joint, and opposite to the metacarpal bone of the index-finger, about half an inch of the screw presented itself above the level of the surrounding skin. Let it be well understood that the hexagonal part was stuck in the wrist, and that only half an inch of the circular part was projecting from the surface. When laid hold of, and the hand partly flexed, it could be slightly moved, but when extension took place, it was quite immovable. The skin on the ulnar side was slightly lacerated, but on the radial it was inverted, and embraced the foreign body so tightly, that the smallest probe could not be passed between the two. Around the wound was a small oozing of blood, mixed with synovia.

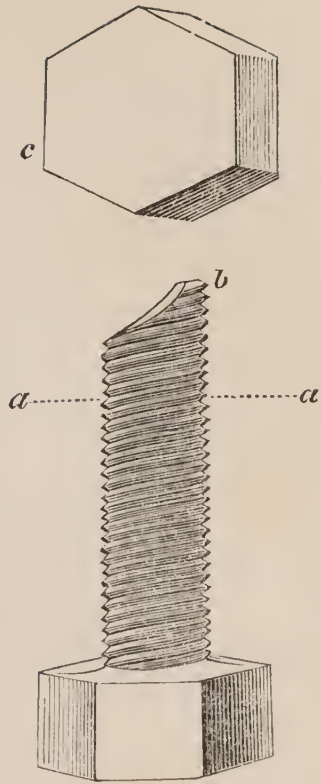
By means of a scalpel the wound was dilated in either direction, and after some time, and no small amount of force, the foreign body was extracted, a discharge of synovial fluid following this release. During the period of the extraction, the patient was faint, and felt very sick, but immediately afterwards he expressed himself as being in a state of comparative ease. Some small fragments of bone were removed, but there was no bleeding. The limb was placed on a straight splint, and the wound dressed with strips of wet lint. The following is a representation of the screw, exactly of the natural size, A A to B being the

portion above the level of the skin, and *c* the irregular hexagonal head, which had been completely impacted in the joint. Thirty drops of laudanum were administered; the patient slept very comfortably during the evening and early part of the night. On the following day he was very feverish, and continued so for nearly a week, by which time a large quantity of pus began to flow from the wound daily. A linseed-meal poultice was then applied in the place of the wet lint. The lower part of the forearm then began to swell and inflame; and as soon as fluctuation could be detected, Mr. Curling made an opening, which measure was followed by the exit of a purulent matter.

Inflammation, occasionally reaching to the arm, continued to recur at irregular intervals for five weeks, during which period several abscesses formed around the joint, and were opened. On June 8th (about five weeks after admission) great swelling and redness of the parts around the primary wound had taken place, and the pus, which had hitherto flowed freely, was scanty in quantity, and of a different colour from that discharged from the other openings. A probe was carefully inserted between the edges of the wound, and some obstruction was distinctly felt about half an inch below the surface of the skin; a fine pair of dressing forceps was then used to extract the foreign body, which proved to be a small portion (about three quarters of an inch square) of the woollen coat, carried into the joint at the time of the accident.

The next day a large piece of loose bone presented itself on the anterior surface of the joint: it was cut down upon and extracted, the patient experiencing great relief from its removal. From this time the openings of all the abscesses, four or five in number, gradually closed, and the original wound occasionally discharged small fragments of bone previous to its perfect closure.

The patient was discharged on August 7th, three months after admission, and ordered to attend as an out-patient. He was then able to move his fingers without giving himself the slightest pain, and all swelling had subsided.



ART. 71.—*Case of Undetected Injury of the Brain.*

By GEORGE ANDERSON, M.D., 12th Lancers.

(*Dublin Quarterly Journal*, May 1851.)

[The following case is interesting as illustrating the slight symptoms which may follow a fatal injury to the brain, until a short time previous to death.]

Trumpeter Henry Grainger, æt. 30 years, was admitted into hospital on the 27th of February, 1851; he was seen at the morning visit, at 10 o'clock, by the assistant-surgeon, Dr. George, who found him in bed, and considered that his ideas were somewhat confused, but attributed this, in part, to indulgence in drink the previous night (the 26th), as, on questioning the patient as to what was the matter with him, he said that on the previous evening he had been fencing with a walking-cane with some of his companions, and that he had received a blow on the nose, or a thrust from a cane in the face. On examination, a small punctured wound was observed on the left ala of the nose, which did not appear larger than the wound arising from a leech-bite; and at this time, though somewhat taciturn, he appeared perfectly sensible, and answered readily the questions put to him.

Fomentations to the wounded part, and aperient medicines, were the remedies prescribed, and no unfavorable symptoms supervened during that day.

At the morning visit on the 28th, he was considered as not better, nor as sensibly worse, though there was no doubt that he was at this time labouring under a considerable degree of stupor; yet no alarming head symptoms were manifest, and consequently no particular examination of the parts where the wound existed was made, and the only additional remedy prescribed was a cold lead lotion to the head and face, and the purgative medicine was repeated.

About 6 o'clock on the same evening I was called by the hospital-sergeant, who stated to me that Grainger was much worse; and though Dr. George informed me, at muster parade in the forenoon, that he could not account for the continued symptoms of drowsiness and stupor in his case, I certainly did not suspect, either *before* or *after* seeing the patient, that there had been any wound of the brain, much less that a foreign body had penetrated to that organ, and was firmly impacted in the patient's skull. When I first saw him this afternoon he was struggling violently with the attendants, who required to use force to keep him in bed; his breathing was stertorous, and he was puffing with the lips; the right eye was fully expanded or staring, and its pupil greatly contracted; ptosis of the left eye-lid existed, and on raising the eye-lid the pupil was found to be extremely dilated. He had passed a large quantity of urine in bed, and his bowels had been open since morning.

On questioning him, or rather calling him sharply by name, he would raise himself into the sitting posture, throw his arms about, and strike at, or take firm hold of any object within his reach.

I had considerable doubt and difficulty in determining on the immediate measures to be adopted, the history of the case being to me quite obscure, and the symptoms being urgent and most unfavorable. Though the pulse was not full or bounding, the action of the temporal arteries was exaggerated, and therefore looking only to present symptoms, I opened the right temporal artery, and though this was done effectually, I only obtained about a couple of ounces of blood from it. I then opened a vein in the arm, but did not obtain much more blood in this way. A large turpentine enema was then administered, and grain doses of calomel were ordered every hour or

half-hour. I left the hospital with very slender hopes that a fatal issue could be averted, and I had not been much more than half an hour in my room when I was called to the hospital, but before I reached it the patient had expired, after a violent convulsion attended with great discoloration of the countenance. The fatal event occurred at about a quarter-past 8 o'clock on the evening of the 28th of February, 1851; and the features of the deceased appeared calm, and not distorted, when I saw the body.

The autopsy took place sixty-three hours after death, on Monday, the 3d of March. On removing the calvarium the dura mater presented nothing abnormal, but when it was removed a considerable degree of chronic arachnitis was presented, and the pia mater was found to be very vascular. After dividing the falx cerebri the anterior lobes were raised, and, gradually proceeding backwards, we had got as far as the division of the optic nerves, when the scalpel struck suddenly on a metallic point or substance directed obliquely upwards and backwards, and protruding into the cavity of the skull, close to the left side of the sella turcica of the sphenoid bone, and pressing or lying on the left optic nerve, or left side of the optic commissure.

The cause of the man's death was at once made manifest to myself and Drs. Carte and George, who were present at the examination, as the foreign body was evidently the brass point or ferule of a small walking-cane.

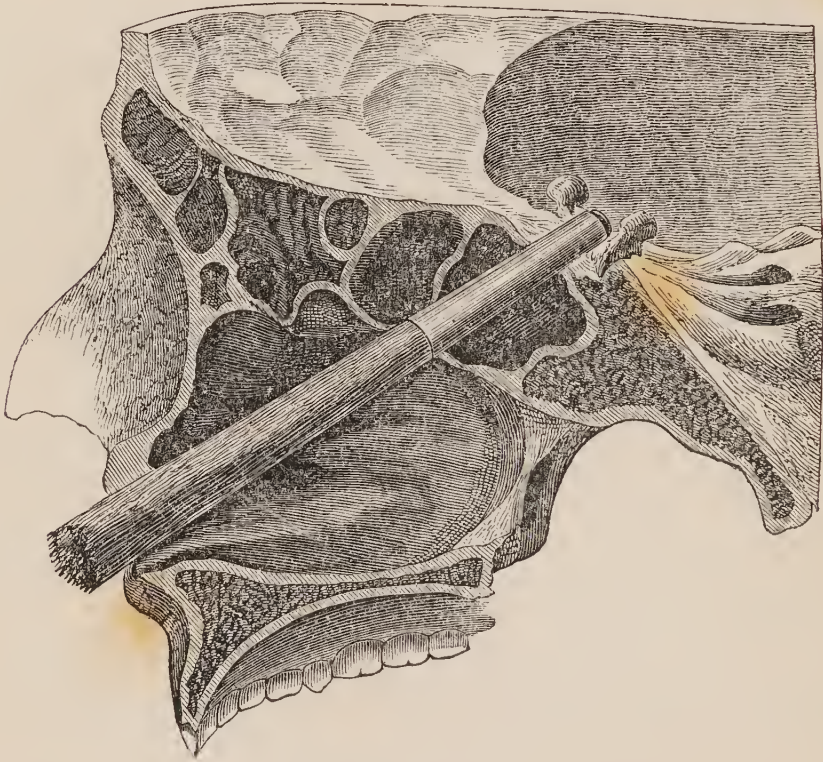
I did not proceed further in the examination, but reported the circumstances to the commanding officer, when a coroner's inquest was ordered to be held on the body.

In the course of the afternoon the coroner held the inquest, and Surgeon Porter, jun., was the medical man ordered by him to investigate into the cause of the soldier's death. I was present when Mr. Porter proceeded with the further examination of the brain, and the parts in connection with the foreign body. On probing the nostril the end of a foreign body could be detected, and before it was removed by Mr. Porter from the situation it occupied in the skull, it was evident to all present at the examination that it was the broken end of a cane, of which the ferule or brass point presented itself in the inside of the skull, by the side of the posterior clinoid process of the sphenoid bone.

Dr. Carte afterwards made a section of the skull, by which the course of the stick, as is shown in the following wood-cut, was exhibited. The point of it had pierced the left ala of the nose, at the junction of the cartilage with the bone, taking a direction upwards, backwards, and a little inwards; in its course it grazed the inferior and middle turbinated bones, passed through the great cell in the body of the sphenoid, breaking off and carrying before it the posterior clinoid process, and finally impinging upon, but not rupturing the membranes covering that portion of the anterior lobe of the brain in immediate relation to the optic nerve of the left side. Anatomically speaking, there was nothing to oppose the onward progress of the stick, for in fact it passed up the nostril, the only resisting part, after it entered the skin, and cartilage, being the body of the sphenoid itself, which,

in the present instance, was very slight, its walls affording almost no resistance, in consequence of their extreme thinness.

It is evident that, while fencing as he had described, the cane had accidentally struck the unfortunate man's face, probably from his own act in parrying the thrust, and that the point of it had entered through the left ala of the nose, passing obliquely upwards and backwards



until it emerged, as described above, by the side of the sella turcica. I should think that the cane had broken off *short* in the nose when it was being withdrawn by his assailant.

Mr. Porter appeared to be of opinion that the brain presented an inflamed appearance, but this may have been more apparent than real, and may in part be attributed to *post-mortem* effects and exposure to the atmosphere, which latter had caused the blood in the vessels to assume a more vermilion appearance than it presented on the morning of the examination.

There can be little doubt if a detailed and accurate account of this unfortunate fencing match had been obtained at the time of the patient's admission into the hospital, and the stick which inflicted the injury had been produced, (which was done after the man's death, and shown to me,) that the attention of the medical officer would have been directed to what he, without any further information than the patient's negative statement, considered only as a trivial puncture in the ala of the nose, and would have undoubtedly led him to ascertain that there was a foreign body impacted within the nostril, and, probably, passing backward so as to touch the brain.

I am inclined, however, to the opinion that had all the above information been obtained at the time of the unfortunate soldier's admission into the hospital, the foreign body might not have been extracted from the situation it occupied in the man's skull, as it required considerable force to drive it with a punch and hammer, from within outwards, in the dead body; and if it had been extracted, the question arises, what chance was there of a fatal termination being averted.

ART. 72.—*Dislocation of the Femur directly Backward.*

By Dr. HORNER.

(*Prov. Med. and Surg. Journal*, June 25, 1851.)

The case alluded to is that of a man, æt. 35, who while assisting to move some coal waggons, got jammed between two of them. As well as he can recollect, he was struck on the buttock. A companion was killed at the same time. The terrible contusions and swelling, which continued for three weeks after the accident, prevented anything like an accurate diagnosis, though fracture of the neck of the femur was suspected. At the end of five weeks, as he suffered much pain in the hip, and down the limb, and was unable to bear his weight on the leg, a further examination was made, and Dr. Horner detected a dislocation of the head of the femur upon the ischium, between the spine and the tuberosity. The signs were as follows:—1st, increased width and flatness of this buttock; 2d, a hard round tumour (head of bone) beneath the gluteus magnus muscle, or rather about the junction of the gluteus medius and maximus; 3d, very slight shortening, the heel not touching the ground when the pelvis was held firmly; 4th, foot apparently natural when in bed; 5th, when standing erect toes can be turned to metatarso-phalangeal articulation of opposite foot, and no further; 6th, toes can be turned out about thirty degrees, and no more; 7th, abduction of femur imperfect; 8th, abduction nearly perfect, as also flexion and extension.

Summary of the symptoms.—Perception of head of femur and its motion, on motion of limb; very slight change in the length of the limb; very slight variation in the line of toes, but impossibility of fully inverting, and especially everting the foot. Two days after the use of the pullies, as before detailed, eversion of the foot was possible to 90 degrees; inversion perfect; improved rotundity of buttock; re-appearance of the hollow of the buttock, just above the trochanter major; abduction of the thigh easy, and the patient fully sensible of a change in the state of the part, as well as of more freedom in his motions.

ART. 73. — *Case of Obturator or Thyroidal Hernia Successfully Relieved by Operation.* By HENRY OBRÉ, Esq., formerly Assistant-Surgeon to the St. Marylebone Infirmary.

At a meeting of the 'Medico-Chirurgical Society,' the author relates a case in which he operated successfully for this rare form of hernia.

The patient, a female, æt. 55, the mother of a large family, was seized with symptoms which led her medical attendant, Mr. Gardener, to believe that she was suffering from rupture. She denied that this was the case, and a careful examination convinced Mr. Gardener that there was no hernia in the usual situations of that disorder. A little below the femoral region on the right side, however, he detected a degree of hardness resembling a small gland, and deeply seated, with some general fulness about the part. The author saw this patient on the fourth day after the symptoms had begun; at this time she was suffering extreme abdominal pain in the umbilical region. During the previous twelve hours her vomiting had been stercoraceous and incessant; the countenance pale and contracted; voice faltering; pulse weak, small, and intermitting—in short, all the symptoms of pending dissolution from strangulated intestine were present. On careful examination, nothing could be detected but a slight degree of fulness in Scarpa's triangle on the right side; that on the opposite side being well marked. On using firm pressure with the ends of the fingers over the neighbourhood of the femoral artery, and a little below the saphenous opening, a distinct hardness was to be felt, slight in extent, but giving the impression as if the sheath of the vessels was being pressed on. The state of the patient was such as to induce the author to propose to make an incision into the upper part of the thigh, down to the hard structure, in the hope that he might find confined intestine low in the femoral canal. He made a straight incision into Scarpa's triangle, as in the operation for tying the common femoral artery, beginning about three inches below Poupart's ligament. When the cribriform fascia was opened, and the saphenous opening exposed, no hernial sac was found, but the hardened structure could be felt lying deep to the inside of this opening. The dissection was with some difficulty continued downward; the fascia lata was divided, and the pectineus muscle exposed. The fibres of this muscle were divided transversely for about an inch and a half or two inches, and a hernial sac was exposed, which rose up into the wound to the size of a pigeon's egg. The finger being passed along the sac, entered the obturator opening. The sac was opened, and the intestine was found to be a portion of the small gut, blue and congested. The opening through which it passed did not tightly enclose its neck, but it was considered prudent slightly to divide the edge. In doing this the saphena vein was wounded, and it was necessary to apply a ligature to its upper part. This was the only ligature required. After the operation no medicine was given; in the course of the day the bowels acted three times, and in a few days afterwards the patient had quite recovered.

Reported in *Medical Gazette*, July 1851.

ART. 74.—*Extirpation of a Voluminous Bronchocele.* By M. Roux.

M. Roux presented, some time ago, a patient of his to the Academy of Medicine, from whom he had successfully removed a large bronchocele. The man's age is about thirty-five, and the

tumour, at first very small, had been increasing, during the last fifteen years, to the size of two fists, and lay principally on the left side of the neck. The swelling was somewhat hard, almost immovable; and seemed firmly attached to the larynx. The patient was extremely anxious for its removal, and M. Roux, after some hesitation, consented to operate. The incision was made in a longitudinal direction, and ran from the os hyoides to the sternum; M. Roux found it easy to enucleate the growth, with the precaution, however, of tying the thyroid arteries and some venous trunks as they came into view. When the tumour was almost completely detached, the pedicle, by which it was still connected with the neck, was tied, and then divided in front of the ligature.

The only phenomenon worthy of attention, which was noticed during the operation, was a fit of dyspnœa, after which the patient experienced an almost complete aphony; this lasted some time after the operation, and even now there is much hoarseness left. M. Roux accounts for this circumstance by attributing it to the division of the anterior laryngeal nerve. The patient was operated on two months ago, and the wound is now perfectly cicatrised. The tumour weighed about nine ounces and a half; it measured nine inches in circumference, and about seven in its transverse diameter. M. Velpeau was afraid that M. Roux's example would be too readily followed by other surgeons under less favorable circumstances, and thought the operation very dangerous. At the meeting, of the 24th of September, M. Velpeau himself brought forward another case of extirpation of a bronchocele, which was performed by M. Cabaret, of St. Malo; this was successful, as well as a third undertaken by M. Hutin. Some discussion arose as to the propriety of giving the name of goître to tumours arising on the thyroid body, as well as to enlargement of that gland itself. M. Sédillot contended that that appellation ought to be confined to enlargements of the thyroid gland; Messrs. Velpeau and Roux opposed that opinion.

Archives Générales de Médecine.

PART III.

MIDWIFERY, AND DISEASES OF WOMEN AND CHILDREN.

SECT. I.—MIDWIFERY AND DISEASES OF WOMEN.

ART. 75.—*On Ovarian Irritation.* By FLEETWOOD CHURCHILL, M.D.

(*Dublin Quarterly Journal*, August.)

[THE disease to which the above term is given, closely resembles the subacute ovaritis of Dr. Tilt; but the cases from which the author has drawn his description lead him to believe the disease is not really inflammatory. His account of it is as follows:]

The chief characteristic symptom is an uneasiness, amounting in the greater number of cases to pain, and in some cases to very severe pain, in one or both iliac or inguinal regions, but most frequently in the left, which Professor Simpson seems to think is owing to the propinquity of the left ovary to the rectum, and the exposure to any irritation thence arising. This pain may be a constant dull aching, or it may be acute and occurring in paroxysms; it is greatly aggravated by standing, and generally by walking; in the severer cases the patient is quite unable to walk.

There is generally some complaint of fulness about the iliac region, but nothing like a distinct tumour is to be felt. There is, however, always considerable tenderness, which, in some cases, is extreme to the slightest touch. When the irritation is great, it may be extended to the bladder, giving rise to a desire to evacuate its contents frequently, and causing great pain in doing so. Hysterical paroxysms are by no means unfrequent.

If we make a vaginal or rectal examination we shall most frequently discover nothing unusual, neither heat nor tenderness nor swelling; in a few cases, however, I have found that moving the uterus laterally caused uneasiness in the side affected.

These are the principal local and direct symptoms the author has observed; they vary much in degree, and are in some cases so intense as to resemble an attack of acute ovaritis. They differ also more or less according to the circumstances in which the attack occurs; and, in order to elucidate this point, the author briefly enumerates the circumstances.

1. In patients who suffer occasionally from amenorrhœa, it is not uncommon to find ovarian irritation at these periods, and not altogether confined to them. Whether the ovarian irritation be the cause of the suppression of the catamenia, or merely a symptom, is a

question not easily decided. In many cases he thinks it is probably the primary affection, but in some others it appears to be the result of the amenorrhœa. The suffering is often considerable, and may be prolonged until the next catamenial evacuation; if that be full and free, the pain and tenderness generally disappear.

2. Upon the sudden suppression of menstruation, it is not unusual for the ovaries to be almost instantly affected, either by the form of disease described, or by an acute inflammatory attack, which is more rare.

3. In dysmenorrhœa there is more or less ovarian irritation. If we examine the patient minutely as to the seat of the pain during the period, we shall find that it is principally in the region of one or both ovaries and often accompanied by tenderness on pressure. In the majority of these cases the ovaries are secondarily affected.

4. In menorrhagia the ovaries may apparently preserve their integrity for a long time; but if the attacks be frequent, the author generally finds that these organs, one or both, become affected, and that the irritation frequently continues long after the discharge has ceased.

5. The author has repeatedly seen this ovarian irritation accompany congestion and erosion of the cervix uteri, but it most frequently comes on after the latter disease has persisted for some time, or after it is nearly or quite cured. The ovarian irritation, however, in these cases, very soon subsides.

6. It occurs in hysteria, both when the latter is evidently dependent upon catamenial disturbance, and when the periodical discharge is quite correct.

7. In some few cases ovarian irritation has been recognised in cases where the uterine and ovarian monthly functions were apparently accurately performed, but the patients were of a highly nervous temperament, in delicate health, and without offspring.

Speaking as to the *pathology* of this affection, the author entertains no doubt that the ovaries, one or both, are the seat of the irritation; the peculiar and fixed locality of the pain, and its frequent connection with the ovarian function of menstruation, all confirm this view. But the next question he considers more difficult to decide positively, viz., is the disorder an inflammatory affection of the ovaries, either acute or subacute? The author believes it to be neither one nor the other, but that the affection described is essentially neuralgic, and not inflammatory.

Again he asks, is this ovarian irritation the cause of the menstrual disorder or its effect, or merely a concomitant symptom? To this he replies that without doubting, that ovarian irritation may disturb the menstrual functions in various ways, he cannot agree with those who think that it invariably does so, nor yet with those who are inclined to attribute all menstrual disorders to deviations from the normal condition of the ovaries.

In enumerating *causes* of ovarian irritation, the author names all those which act upon either the uterus or ovary and disturb their functions, and among these the most frequent, probably, is cold.

He believes that, in many cases, excess in sexual intercourse has

given rise to it, and also that in a few cases it may originate from the entire deprivation of that stimulus.

The circumstances under which the attack occurs, that is, its relation to the menstrual functions, the symptoms, and the peculiar locality of the pain, render the *diagnosis* tolerably easy in most cases. It may, certainly, be mistaken for intestinal irritation; but, in general, there are no other symptoms than the pain to justify such an opinion. The bowels, even if irregular, are free from irritability.

It will, however, require a little more trouble to render it certain that there is not acute ovaritis, which the tenderness might lead us to suspect. But this tenderness is *generally much greater than that resulting from inflammation*; it is a kind of a nervous tenderness which shrinks from the weight of a finger as much as from severe pressure. Moreover, in acute ovaritis, the organ is always swollen and enlarged, and it can generally be felt distinctly to be so by an internal examination.

In phlegmonous inflammation of the uterine appendages, or pelvic abscess, as it has been termed, the hard and painful tumefaction is quite plain at the brim of the pelvis, and, therefore, it cannot easily be confounded with the present disorder.

The author does not enter at any length into details of the *treatment* of this disease. In the choice of remedies he is governed, to a certain extent, by the health, strength, and state of constitution of the patient. With strong, healthy women he has tried leeches to the ovarian region, with some benefit but not complete success, nor in all cases: from six to twelve may be applied at once, and repeated, if necessary, after an interval. Poultices after the leeching are of use; and, indeed, when no leeches have been applied, much comfort and relief will be derived from repeated poulticing. With delicate women, and they are frequently the subjects of this disease, bleeding in any form has appeared rather injurious than beneficial.

The author has tried the repeated application of small blisters with better results than leeching. The irritation of the surface certainly relieves the pain in many cases, and, if continued, may finally cure it.

Anodyne liniments and anodyne plasters occasionally seem to afford relief, but they are often of little or no use; anodyne enemata have been used several times with partial success.

Having failed in affording any relief in two or three obstinate cases, Dr. Churchill determined to try the effect of opium applied to the upper part of the vaginal surface. He accordingly ordered some balls or pessaries to be made, somewhat in the mode of Dr. Simpson's medicated pessaries, each ball to contain two grains of opium, half a drachm of white wax, and a drachm and a half of lard. The whole, when mixed together, formed a ball about the size of a large marble, which was placed at the upper end of the vagina by means of the speculum, leaving the patient in bed for the day. The success was beyond the author's expectation, and has been not less so in very many subsequent cases.

ART. 76.—*On Irritable Uterus.* By F. W. MACKENZIE, M.D.*(London Journal of Medicine, May 1851.)*

The term Irritable Uterus is applied to a painful condition of the organ, not caused by displacement, inflammation, or appreciable organic disease. It is met with in various degrees of intensity, from slight uneasiness to excruciating suffering. Although apparently a simple lesion of innervation, it is found to be a very obstinate disorder.

The slighter forms of the disorder are characterised by pain in the uterine region, increased by standing or walking, and relieved by laying down. The pain radiates from the uterus to the groins, loins, and hips. A sensation of bearing down is often complained of, and there is leucorrhœa or dysmenorrhœa. On examination the uterus is found to be excessively sensitive to the touch, but not displaced, or sensibly diseased. The general health is generally feeble, the circulation languid, and the digestive organs are generally in a faulty condition. The patient will often be found to have suffered from severe mental affliction, or has undergone physical privation and fatigue, and that, as a consequence, spinal irritation and anæmia have resulted.

The more severe form of this disease has been very graphically described by Dr. Gooch. He remarks that a patient, suffering from irritable uterus, complains of pain in the lowest part of the abdomen along the brim of the pelvis, and often also in the loins. The pain is worse when she is up and taking exercise, and less when she is at rest in the horizontal posture. If the uterus is examined, it is found to be exquisitely tender. As soon as the finger reaches, and is pressed against, the uterus, it gives exquisite pain; this tenderness, however, varies, at different times, according to the degree of pain which has been latterly experienced. The neck and body of the uterus feel slightly swollen; but this condition also exists in different degrees; sometimes being sufficiently manifest, sometimes scarcely or not at all perceptible. Excepting, however, this tenderness, and the occasional swelling, or rather tension, the uterus feels perfectly natural in structure. There is no evidence of scirrhus in the neck; the orifice is not misshapen, nor are its edges indurated. The circulation is but little disturbed; the pulse is soft, and not much quicker than is natural, but it is easily quickened by the slightest emotion. In a few instances, however, there has been a greater and more permanent excitement of the general circulation. The degree in which the health has been reduced has been different in different cases. A patient who was originally delicate, who had suffered long, and has used much depletory treatment, has been, as might reasonably be expected, the most reduced. She has grown thin, pale, weak, and nervous. Menstruation often continues regular, but sometimes diminishes or ceases altogether. The functions of the stomach and bowels are not more interrupted than might be expected from the loss of air and exercise; the appetite is not good, and the bowels require aperients; yet nothing more surely occasions a paroxysm of pain than an active purgative. Such are the leading symptoms of this distressing complaint. To

embody them in one view, let the reader imagine to himself a young or middle-aged woman, somewhat reduced in flesh and health, almost living on her sofa for months or even years, suffering from a constant pain in the uterus, which renders her unable to sit up, or to take exercise;—the uterus, on examination, unchanged in structure, but exquisitely tender, even in the recumbent posture; always in pain, but more or less frequently subject to great aggravations.

With regard to the pathology of these cases, Dr. Gooch observes, that the causes, to which this disease has been attributed, are generally considerable bodily exertion at times when the uterus is in a susceptible state; but he remarks, that the patients had previously manifested signs of a predisposition to it. They were all sensitive in body and mind, and many of them had previously been subject to painful menstruation. As to its proximate nature, he is satisfied by stating that it consists in a morbid condition of the uterine nerves, attended by pain, and sometimes vascular fulness; and he likens it to the irritable breast, the irritable testis, and the painful condition of the joints which is sometimes met with in hysterical females. He does not venture to explain its pathology any further.

A consideration of the cases of this disease which have come under my notice, appears to me to justify the following conclusions:—

First. That, in the majority of instances, irritable uterus is rather a sympathetic than an idiopathic disease of that organ.

Secondly. That it is sympathetic of irritative disorder of various organs with which the uterus has intimate relations, the irritation of which it is reflected, either partially or entirely, upon the uterine ganglia and nerves.

Thirdly. That whilst such reflected irritation is its immediate cause, it is remotely dependent upon a defective condition of the blood, which would appear to operate by producing a morbidly irritable state of the nervous system generally, and of the uterine ganglia and nerves in particular.

[These propositions are supported by the detail of nine well selected cases, upon which Dr. Mackenzie makes the following general observations:]

Upon a general review of the preceding cases, the first inference I would venture to draw from them is, that they are affirmative of the truth of the propositions which were advanced at the commencement of this paper. In all, the uterine affection appeared to be consecutive to, or sympathetic of, constitutional derangement or irritative disorder of other organs. In none could it be regarded as dependent upon idiopathic disease of the uterus; and additional corroboration is derived from the fact, that it disappeared, in most instances, under the influence of treatment of a general rather than of a specific character.

Another inference which may be drawn from them is, that the influence of gastro-intestinal disorder and spinal irritation are very considerable in the causation of uterine derangements. In the majority of the cases reported, these coexisted, and would seem to have had a similarity of origin. In all, they were associated with anæmia, and had been preceded by much mental anxiety. How much, therefore, is due to each in the production of the uterine symptoms in these cases,

it is impossible to say. Many circumstances, however, which have come to my knowledge, lead me to believe that derangements of the uterus, involving more particularly its nutritive and secretory functions, such as leucorrhœa and disorders of menstruation, have rather a gastro-intestinal origin when sympathetically induced; whilst those which affect more particularly its sensory functions, producing neuralgia, and various irritable conditions, are, for the most part, connected with an irritable or morbid condition of the spinal cord.

But it is not contended, that hysteralgia is in all cases necessarily connected with spinal irritation, or gastro-intestinal disorder. I believe them to be very frequent causes, but I have met with instances in which it existed irrespectively of either. In gouty and rheumatic subjects, considerable uterine pain, more or less of a persistent character, is often met with, doubtless of a gouty or rheumatic nature; and I believe that severe irritation of any important organ or nerve may, under certain circumstances, be reflected upon the uterus, so as to give rise to very distressing symptoms.

[In further illustration of the pathology of these affections, the author has made the following analysis of thirty-seven cases, in which the uterus was in a morbidly irritable state, not in consequence of displacement or appreciable disease. In all there was marked pain and uneasiness in the region of the uterus, which varied in intensity in different instances, and in some had been of long continuance:]

1. UTERINE COMPLICATIONS were observed in the following proportions:—

In 3 there was no other uterine disease.

„ 15 the pain was complicated with leucorrhœa.

„ 7 „ „ leucorrhœa and dysmenorrhœa.

„ 3 „ „ leucorrhœa and amenorrhœa.

„ 1 „ „ leucorrhœa and menorrhagia.

„ 4 „ „ leucorrhœa and irregular menstruation.

„ 4 „ „ dysmenorrhœa alone.

„ 2 „ „ menorrhagia.

„ 1 „ „ fibrous enlargement of the neck of uterus.

2. ANTECEDENTS. The irritable state of the uterus had been preceded:—

In 4 cases, by weakening discharges, such as profuse hæmorrhage, and protracted suckling.

„ 5 „ „ mental anxiety and distress.

„ 8 „ „ mental anxiety, with disorder of the digestive organs.

„ 2 „ „ sudden fright.

„ 18 „ „ disorder of the digestive organs.

3. CONCOMITANT AFFECTIONS:—

In 18 there was well-marked anæmia, with disorder of the stomach and digestive organs.

„ 12 „ „ anæmia, with spinal irritation.

„ 3 „ „ spinal irritation.

„ 4 „ „ great irritability of stomach and digestive organs.

[The facts, contained in the foregoing analysis, appear to the author to justify the following conclusions:]

First.—That, from the operation of the same causes, various and dissimilar uterine diseases may be occasioned. Thus the principal antecedent circumstances in these cases were, for the most part, the same, and yet very different disorders were the consequence. In some, there was simply a painful condition of the uterus; in others this coexisted with leucorrhœa, amenorrhœa, dysmenorrhœa, menorrhagia, &c. The probable explanation of this is, that the operation of the different causes in question is primarily upon the nerves of the uterus, and that irregular actions, in regard to these, precede and give rise to those particular symptoms, which, in the aggregate, constitute disease as known by a given appellation.

Secondly.—That, all these lesions may arise from constitutional disorder, may be perpetuated by it, and in many instances will cease on its removal. In these cases the chief circumstances which had preceded were either of an enervating or depressing nature; such as loss of blood, over-suckling, &c., or mental depression or uneasiness. The obvious effect of these would be to lower the tone of the nervous system generally, and to render it morbidly susceptible to impression. Thus it would happen in regard to the uterine ganglia and nerves, that they would be prone to irregular actions, and to participate readily in the morbid affections and conditions of other organs. If, again, the impressions leading to such abnormal actions are received from or through the medium of the ganglionic system of the nerves, it is reasonable to suppose that the functions to which these are more immediately subservient, such as nutrition and secretion, would be more particularly disturbed, whilst those received from or through the medium of the cerebro-spinal system would rather give rise to painful and uneasy feelings; and thus may arise the difference in the uterine derangement which is consecutive to chylopoietic disorder and spinal irritation.

ART. 77.—*On a Form of Sanguineous Pelvic Tumour in Females.*
By M. NÉLATON.

(*L'Union Médicale*, and *London Journal of Medicine*, June 1851.)

M. Nélaton calls attention to a peculiar form of tumour, hitherto much neglected by authors. These tumours are usually preceded by some general symptoms, as *malaise*, disturbed menstruation, pains in the hypogastrium, and a feeling as if a heavy body were about to escape from the vagina. The abdomen is sometimes enlarged, and a hard, very painful tumour is felt by the patient in the hypogastric region; in other cases, they are not aware of its existence, and, when it is pointed out to them, they cannot say how long they have had it. On examination, the abdomen is found to be inflated, tense, convex, and painful. The decubitus is dorsal, with the thighs flexed on the pelvis. By palpation in the hypogastrium, a tumour is felt in the cavity of the pelvis (*petit bassin*). This is sometimes confined within its inner border, and sometimes extends as high as the umbilicus; it

is commonly inclined towards the right iliac fossa. The tumour is small, rounded, without knotty projections, and becomes gradually lost in the pelvic cavity; it is scarcely moveable, and is of pretty firm consistence, sometimes presenting fluctuation. On vaginal examination, there is found, between the uterus and rectum, a tumour, advancing towards the orifice of the vulva in proportion to its size. It is smooth, rounded, and fluctuating, varying from the size of a large goose-egg to that of a thumb, without pulsation or expansive movement; it may narrow the vaginal canal so as only to permit of the passage of the index finger. The uterus may be raised by the tumour, so that its body is felt above the pubes; and its neck may be so much elevated, that the fore finger can only with great difficulty reach it.

The treatment of these tumours consists in evacuating the liquid which they contain. M. Nélaton proposes to employ a large trocar, and then a simple lithotome to enlarge the opening. The patient is placed on her back, on a tolerably high bed, with her legs and thighs bent, as in the position for lithotomy. By introducing a speculum into the vagina, the tumour is discovered towards its base, at the posterior wall. The point where fluctuation is most apparent having been discovered, a long trocar is introduced, with a canula sufficiently long to allow the escape of the matter, which is liquid, black, and viscid, like treacle. The incision ought generally to be three *centimètres* in extent; it should be made in the axis of the vagina, so as to avoid wounding the uterine arteries. It should also be carefully ascertained that there are no arteries on that part of the wall in which the incision is made. The incision should neither be too wide nor too deep, so that the rectum may be avoided. When, some days after the operation, the liquid which escapes has become purulent and fetid, disinfectant injections should be employed. The strength of the patient should at the same time be supported by quinine and other tonics. The walls of the tumour should also be explored with a scoop (*curette*), so as to remove any adherent clots, which may be in a state of commencing putrefaction.

ART. 78.—*On the Round Ligaments of the Uterus.* By M. RAU.

(*Zeitschrift für Geburt.*, and *Brit. and For. Med.-Chir. Rev.*, July 1851.)

In this paper M. Rau refers, at great length, to the various opinions that have prevailed respecting the structure, functions, and diseases of the round ligaments; but we have only space to refer to his own views. In regard to their *structure*, he considers that, for two thirds of their course, they are composed of a continuation of the muscular substance of the uterus, over the anterior and posterior surface of which they are expanded fan-like, reaching to its fundus, and encompassing it on either side. The muscular fibres are chiefly in connection with the most superficial layers of the uterine structure, but likewise do extend to the middle ones. He admits the correctness of Rosenberger's description of the course of the three bundles of muscular fibres that form part of the ligament, while it is in the inguinal canal; but he objects to the statement that they quit this with the termination of

the ligament. The muscular fasciculi take an exactly contrary direction towards the uterus. Some of the fibres proceed to the horizontal ramus and symphysis pubis, as observed by some older writers, though erroneously contradicted by Haller.

Among the various opinions which have been entertained as to their *functions*, that which has preponderated assigns to them the power of exerting a fixing or suspending power upon the uterus. Displacement and prolapse of this organ have been explained by their rupture or relaxation,—no one caring, however, to demonstrate the existence of these conditions, or to explain why, in cases of the absence of these ligaments, such change in the position of the uterus was not observed. Direct experiment has shown the great extent to which this organ may be changed in position, without exerting any corresponding effect upon the ligaments. In M. Rau's opinion, during the unimpregnated state, the ligaments exercise no function; and they only enter into activity when their muscular structure, in common with that of the uterus, undergoes so vast a development, that by the ninth month of pregnancy this has increased six fold. A consideration of their various points of insertion in the abdominal ring, the fascia femoris and the pubis on the one hand, and their powerful expansion over the uterus on the other, teaches us at a glance, in what direction their power is exerted. The elevated uterus, containing the ovum, is drawn down towards the pelvis, the fundus being directed forwards and the cervix backwards, and the child's entrance into the superior aperture of the pelvis facilitated. The fundus uteri contracts itself laterally, in order to expel its contents; and the necessary consequence of the distribution of fibres is the raising and pointing the os uteri during the prevalence of a pain—the round ligaments furnishing a *punctum fixum* during the screw-like motion of the organ,—or this very motion may be due to the agency of the ligaments. The contractile action of the round ligaments is exerted even for weeks prior to labour, producing a painless action (*travail insensible*), the fruit of which, when it does not become too urgent and induce premature labour, is confined to the production of that sinking of the womb observable during the latter weeks of pregnancy.

There is very little original matter in M. Rau's observations upon the *diseases* of the round ligament. His references, too, chiefly relate to the older writers; and he does not seem to be aware that much has been published of a later date.

ART. 79.—*Retention of the Catamenia.—Death from Effusion into the Peritoneum through the Fallopian Tubes.* By Dr. MARCHAND.

(*Archives Générales de Médecine*, July 1851.)

Case.—A young woman, æt. 22, who had never menstruated, had suffered since the age of 13 or 14 from pains in the hypogastrium and loins. The pains recurred each month at the same period, and continued three or four days. During some years the abdomen had been tense, and, for some time, the enlargement and the pain had gradually and considerably increased; the general health was, however, very good. On examination, it was ascertained that the external orifice of

the vagina was closed by a membrane, behind which the menstrual fluid was retained. This membrane was laid open by a crucial incision; and, after some blood had been forcibly ejected to some distance, there escaped two or three quarts of a black inodorous fluid, without clots. Compression was made on the abdomen. For three days the menstrual fluid continued to escape without pain, to the amount of four or five quarts: the abdomen diminished in size, and the patient seemed to be going on well, when she was seized, on the fifth day, with subacute peritonitis, of which she died nine days after the operation.

Autopsy.—The whole of the peritoneum beneath the transversalis muscle was in a state of inflammation. The convolutions of the intestines, slightly adherent to each other, were covered with false membranes, the serous membrane beneath being of a deep red colour, especially in the vicinity of the pelvis, where, and in the iliac fossæ, there was some pus or sero-purulent fluid. The uterus was longer than natural, about the size of a fist; the cavity of the neck was also dilated. The vagina was enormously dilated, especially towards the upper portion. The vaginal and uterine mucous membrane were tinged with blood. The Fallopian tubes presented different appearances in their uterine and in their ovarian portions. The uterine part was normal; while the ovarian or abdominal end was distended with black blood, and resembled a varicose vein of the size, at least, of the little finger. The dark blood which they contained was very fluid, and could be very easily pressed out in drops through the fimbriated end of the tube. There were some drops of the dark blood on the portions of the peritoneum in contact with the Fallopian tubes; and at these points were the most evident traces of peritonitis.

ART. 80.—*On Bandaging the Abdomen after Delivery.*

By W. B. KESTEVEN, Surgeon.

(*Medical Gazette*, Sept. 12, 1851.)

[Mr. Kesteven, although sensible that the weight of opinion is against him, records his conviction that too much stress has been laid upon the importance of the bandage after delivery, and that the rationale of its usefulness has been misunderstood. In order to arrive at a correct conclusion on the subject, he examines it under the following points of view:—1st. The alleged object to be gained by the bandage. 2d. Its real effects. 3d. Its proper object, and the right period for its application. With this intent, he thus proceeds:]

1st. The objects alleged to be gained by the application of the roller directly after the completion of labour, are:—*a*, to promote the contraction of the uterus; *b*, to lessen the severity of the after-pains; *c*, to prevent hæmorrhage; *d*, to prevent syncope; *e*, to protect the patient against the consequences of sudden alteration of the balance of the circulation, by which syncope, inactivity of the uterus, hæmorrhage, and subsequent diseases, have been produced.

On examining, at the bedside, the validity of these several objects,

t may be observed, in the first place, that all, or any, of these supposed ends may be gained without the use of the bandage.

a. In the vast majority of cases the uterus contracts rapidly, firmly, and permanently, directly upon delivery, without the aid of bandaging. That such is the case a very short experience among the *labouring poor* will soon convince the clinical student. The poor women who are delivered by midwives, and the hundreds, aye thousands, who are yearly delivered without any aid, would, were it not so, have all the dangers of uncontracted uterus to contend with. That such is rarely the case admits of no doubt.

b. That measure which shall promote the contraction of the uterus can hardly be seriously recommended as a means of lessening the severity of the after-pains; the contradiction is too manifest to require further comment.

c. For the prevention of hæmorrhage the application of a roller certainly possesses no claim. Every practitioner who has diligently applied the bandage has had to remove it, in order to apply that efficient pressure to the uterus which is most important in promoting its contractions, hæmorrhage having taken place in spite of the compression that had been made by the bandage. In fact, the tightly bandaging the hypogastric region with the addition of pads, compresses, basins, &c. &c., has probably frequently given rise to hæmorrhage by interfering with the gradual tonic contraction of the uterus. The early application of a binder and compress is a complete obstacle to that vigilant attention to the state of the uterus after labour, which it is the wisdom as well as the duty of the medical attendant to pay for some little time after delivery. Where pressure is properly made, hæmorrhage is not frequently met with. The very officious accoucheur, who loads his patient's abdomen with divers pads, and other similar contrivances, must frequently have had occasion to remove them. Without these, the earliest signs of hæmorrhage may be recognised; with them, they are often concealed; without these hinderances, therefore, the occurrence may be arrested at its outset. It is not the purpose of the present communication to dwell upon the treatment of uterine hæmorrhage, but the above hints may serve to show that the bandage has few claims for adoption on that score.

d. The prevention of syncope is undoubtedly an object of paramount importance; it calls, therefore, for very full examination, as obtainable by the use of the bandage after labour. The indication for its use in reference to the prevention of syncope is theoretically deduced by analogy from the necessity that exists for the application of abdominal compression during the operation of paracentesis. Here, although an analogy does undoubtedly exist, the cases are far from parallel—the conditions not identical—at least not in labour unattended with flooding. When hæmorrhage from the uterus occurs, the heart is then physiologically affected in the same manner as where a large quantity of dropsical effusion has suddenly been removed from the abdomen. The removal of the pressure from surrounding vessels in the one case being performed in the upright or sitting posture, suddenly empties the heart of its blood, in the same way that it is emptied by a sudden gush from the uterus. In natural labour there

are these points of physiological difference: the heart is not suddenly deprived of a quantity of blood, because the mass of blood previously circulating in the enlarged vessels and hypertrophied structure of the uterus is thrown back upon the aorta *pari passu* with the diminution of the tumour by the contractions of the uterus. The consequent removal of pressure from the surrounding vessels is therefore compensated by the non-abstraction of blood from the arterial system, which, so far, may be regarded as the equivalent of the compression which is had recourse to for the purpose of obviating the sudden change in the state of the circulation that takes place in tapping. Cases of excessive quantity of liquor amnii, triplet and quartet cases, form instances in which the analogy with the effect of tapping becomes closer. The difference in position must also be borne in mind, when an analogy is attempted to be drawn between these two conditions. In tapping, the position is erect—in labour, it is horizontal. To this rule of difference, however, exceptions occur, parturition sometimes occurs so rapidly, and so unexpectedly, that delivery takes place before the parturient woman can assume the recumbent posture. That such exceptional cases do not invalidate the rule is sufficiently shown by their rarity, and also by the evil consequences that often follow thereon. It may be remarked then for these reasons, that it is obvious that women after delivery have not to thank the bandage for their exemption from syncope. The writer has never seen a case of mere syncope occurring after labour, where the horizontal posture has been carefully observed for some hours, although he has systematically neglected to apply the bandage. He has occasionally seen it, and has heard of even fatal syncope where this precaution of the horizontal position has been violated.

e. Having above disposed of the futility of the argument for the use of the bandage to prevent hæmorrhage or syncope, other evils supposed to be consequent upon a disturbance of the balance of the circulation are obviously as likely to be benefited by that contrivance.

The second division of this subject is next examined.

2d. The real effect of bandaging the abdomen after delivery.

a. It affords support to the abdominal walls, if applied moderately firmly.

b. It gives comfort to the patient, and meets her wishes or prejudices with reference to the preservation of the figure. Among its effects, which are not so harmless as these, are its aggravation of after pains, and the inducement of irregular contraction of the uterus; its obstruction to manipulations; its interference with the action of the diaphragm; its displacing the uterus, and causing obliquity, prolapsus, &c., of that organ; its interference with a most valuable means of controlling uterine hæmorrhage, viz., the compression of the aorta. All these are highly important matters, and are to be found among the consequences of the tight bandaging which is adopted by some practitioners.

3d. The consideration of the two preceding topics leads to that of the third,—the proper object of, and right period for the application of the bandage. The first point may be very briefly expressed in the words of Dr. Blundell. It is to be applied “with that degree of

tension which may yield a sense of grateful support." This is the whole truth of the question—the sole object of the bandage is to afford a comfortable degree of support; it is not to effect forcible compression of the abdomen.

The proper period for its employment is therefore not until the uterus has firmly contracted, the patient having been left to undisturbed rest for at least two hours, has had her linen changed, and is being "put to bed." Before this period it, as has been shown, is but an incumbrance. At this time the bandage will afford "a sense of grateful support," and will meet the patient's prejudice with reference to the preservation of her figure—a prejudice which may in this way be harmlessly humoured; it being emphatically impressed upon the minds of the patient and her attendants, that the application of a bandage is of infinitely less importance than quiet rest; that the contraction of the uterus is more effectually and naturally induced by the child's mouth at the nipple, than by all the screwing and squeezing machines that ever were contrived.

If the necessity of any proceeding may be measured by the end it is intended to serve, most assuredly the importance of the abdominal bandage has been much over-rated. The preceding remarks have shown that its alleged objects are not obtainable, even if they are desirable; that its real effects are either trifling, or evil; that its proper object is of a very subordinate character, and pertaining rather to the functions of the nurse than to those of the medical attendant.

ART. 81.—*On Fissure and Laceration of the Perineum and Cervix Uteri in Natural Labour.* By Professor SIMPSON.

(*Monthly Journal of Medical Science*, May 1851.)

As the result of a long series of observations, Dr. Simpson has drawn the following conclusions:—

1. Fissuring and laceration of the cervix uteri and perineum are not, as is generally conceived, rare lesions during labour; on the contrary, they are very common occurrences, especially in primiparous labours.

2. These lesions are not, as has been often alleged, necessarily the result of mismanagement, but they occur constantly in practice, despite every modification of management, and in cases also in which no kind of management has been adopted.

3. Evidence of the great frequency of laceration of the anterior structures of the perineum is furnished by—1st. Almost every careful autopsy of women after delivery, whether assisted or not assisted during their labour. 2d. By the contracted or shortened state in which the perineum is almost always found, when vaginal examinations are made for uterine disease in women who have borne a family. 3d. By the fissuring or laceration itself being usually traceable (under careful tactile examination), particularly in the first labours, when that examination is instituted in the interval of pain, immediately before the passage of the child's head, or after its birth.

4. Lacerations of the perineum may be often felt beginning in the

form of slight roughish rents or fissures upon the mucous surface of the perineum, and these may extend either backwards or forwards; and if they extend forwards, they at last run over the edge of the perineum, and along its cutaneous surface; the mucous and cutaneous structures of the perineum being thus sometimes lacerated, whilst its middle, cellular, and fascial tissues are comparatively entire, or at least not so deeply and extensively injured.

5. The proper management and support of the perineum no doubt modifies and diminishes this form of perineal lesion; but it fails far more frequently than is generally supposed in entirely preventing it.

6. The evidence of the frequency of fissuring of the os and of the lower or vaginal portion of the cervix uteri is the same in character, and consists principally—1st. In the frequency with which slight laceration of the edges of the os, and of the mucous and middle coat of the cervix, is detected in autopsies after natural labours, and particularly with first children. 2d. In the permanent marks of its previous occurrence, as exhibited in those cicatrices and irregularities of the cervix uteri which anatomists have long empirically, but correctly, laid down as proofs that they, in whose bodies they are found, have been previously mothers.

7. Fissures and lacerations of the vaginal portion of the cervix uteri not unfrequently occur to a very considerable extent, in cases in which the tissues of the cervix have been rendered rigid by previous inflammation, by carcinoma, or by other morbid causes; and, in such cases, this fissuring or laceration, if limited to the lower or vaginal portion of the cervix, seems to be accompanied with little or no danger.

ART. 82.—*Separation of the entire Circumference of the Vaginal portion of the Cervix Uteri, from pressure of the Child's Head during Labour.*

Mrs. D—, from Ireland, æt. from 30 to 35, of a strong muscular frame and sanguine temperament, was taken in labour with her first child on the 4th of November, 1845, about 12 m.

The os uteri, when first examined, was found dilated to the size of half a dollar, its edges were thin and hard, membranes somewhat protruding and tense. The anterior lip of the os presented a remarkable prolongation of an inch apparently.

The membranes soon ruptured, and the pains became more energetic. The os uteri and the vagina were nearly free from secretion. The pains became very strong and bearing down. There was frequent vomiting and insatiable thirst.

On the 5th, at 6 a.m. The head of the child was found to have descended, carrying before it the os uteri. The prolongation of the anterior lip was engorged, an inch in thickness, and presented in advance of the vestibulum. Posteriorly the os uteri was thin, hard, and very rigid. Pulse full and strong; face flushed, and skin hot; vomiting persisting. She was bled from twenty to twenty-four ounces. In the course of the morning, a pint and a half of urine was drawn from the bladder by the aid of a gum-elastic catheter. The

bleeding was repeated to the extent of a pint, and the extract of belladonna was applied to the os uteri.

At 10 $\frac{1}{2}$ p. m., nearly thirty-five hours from the commencement of active labour, the pains having become still more energetic, the head was suddenly delivered, and upon examination it was found that a portion of the cervix had preceded it. Supposing at the moment that the laceration was only partial, the operator cut across that portion which presented, with a pair of scissors; but in a moment after, the body of the child was delivered, when it was ascertained that the separation had been nearly complete, the portion attached, and which had to be cut with the scissors, being only about half an inch long. The width of the separated cervix varied from an inch to an inch and a half.

The delivery of the child was followed by a gush of very offensive and partially coagulated blood. The placenta had separated before delivery, and was removed. The child was, of course, still-born.

On the 7th, the pulse was 84, skin pleasant, abdomen but little painful to the touch.

In the evening, the pulse rose to 102, and the abdomen became more tender. Ordered calomel, gr. v, and Dover's powder, gr. x; hop fomentations and an enema.

On the 8th she was relieved, and convalescence fairly commenced. The lochia were natural.

The woman subsequently became pregnant again and was safely delivered.

American Journal of Medical Science, April 1851.

ART. 83.—*Remarks on the Cæsarean Section,—Craniotomy,—and the Induction of Premature Labour.* By THOMAS RADFORD, M.D.

(*Medical Gazette*, April 4, 1851.)

[The author of this paper, of which we give an abstract, is, as our readers are aware, a strenuous advocate of the Cæsarean section; and he therefore naturally rebels against the harsh epithets which have of late been freely bestowed upon this operation. After alluding to the opinions of some of his opponents, Dr. Radford continues:]

Many cases of protracted labour, from distortion of the pelvis, have frequently occurred in my practice, some of which have terminated naturally, some by the forceps, others required craniotomy; five of these required the Cæsarean section; which are quite sufficient for me to judge of the contingent circumstances which happened during and after the operation, and authorise me to state, whether harsh terms are warrantable. It is not invariably destructive, as in two out of five cases both mother and infant were saved; it is not a cruel and inhuman operation, because it has been in every case undertaken with the most humane and sympathising feelings, and with the hopes of rescuing the unfortunate creature from long suffering and impending destruction; it is not a barbarous procedure, being recognised by the best obstetric writers, in all civilised countries, as the only available recourse to meet the extreme difficulty of such cases; it is not a bloody operation, for in none of these cases was there much blood lost; it is more terrible,

horrible, and dreadful to the witnesses of the operation, than to the poor suffering woman herself; she hails with joy any plan which promises to terminate the anguish she has so long endured. It cannot be murderous; to be so, it requires "malice prepense" on the part of the operator; on the contrary, it is done to save two lives. Such an epithet is more appropriate for the crotchet operation. We agree to say it is an undesirable operation: and we hope no man is so wanting in moral principle as to desire such a case to happen in order to gratify his "rage for cruel and bloody operations." The justice and necessity of this operation will be proved in the course of this paper.

A very eminent obstetric practitioner has lately remarked that he is fully satisfied that if in great distortion of the pelvis abortion or the induction of premature labour were had recourse to at the proper season, no case could occur in which the Cæsarean operation could be required. Craniotomy or embryulcia are said to be equal to the delivery of some if not all cases of distortions of the pelvis in which the Cæsarean section has been performed.

These several methods, which are recommended to supersede this procedure, do not all stand on the same moral and professional grounds. The induction of abortion, and the induction of premature labour, are considered equal to prevent the Cæsarean operation ever being required, even in the most distorted pelvis. Under such circumstances we are recommended to adopt this practice; nay, I should think, from the tone of the author, either the one or the other procedure must be had recourse to, if the practitioner desires to discharge his duty to his patient. This injunction is not alone confined to those cases with which the practitioner must of necessity be acquainted,—at least, that there positively exists a considerable diminution in the pelvic diameters, from his experience in former labours; but it is considered that this practice is applicable, and ought to be adopted, under such circumstances, in first labours.

These statements naturally suggest to the mind an important question,—whether there are any certain indication of the existence of extreme pelvic deformity, during the early period of a first pregnancy, which demand manual examination. The pelvis may be extremely deformed in early life by rickets, and although the disease has been arrested, yet the mischief inflicted upon its bones continues, and its diminished diameters bear the same relative proportion to its present degree of development which they did to that at an earlier period. In such a case, extreme distortion of the pelvis may exist, through the whole period of life, without the slightest external evidence, either in its bones or other portions of the osseous system; and, therefore, this state can only be ascertained when labour has commenced. Internal exostosis may grow from any of the bones of the pelvis, without a suspicion that such a disease exists. These tumours acquire different sizes; sometimes they become so large, and diminish the pelvic diameter so much, as to render the Cæsarean section necessary: and yet, until labour has happened, there were no external marks, which showed that so serious an internal impediment to the progress of the child had previously existed. (Vide case of Cæsarean operation, by Dr. M'Kibbin; Ed. Med. and Surg. Journal, vol. xxxv.)

Fracture of any of the bones of the pelvis may occur at any period of life; and when they are united, either its inlet, outlet, or cavity may be very considerably diminished in their measurement. If pregnancy takes place after such an accident, the Cæsarean section may be the only means by which delivery can be effected. This happened in Mr. Barlow's case; and although there was here external evidence that great mischief had been done to the pelvis, yet there was no alternative for this operation; for neither of the obstetricians were acquainted with the pregnancy until called in after the labour had lasted for a considerable length of time; a midwife had been employed in the first instance. But in other cases of this kind of accident which may take place in early life, no external traces of injury may exist, and the occurrence may not be communicated to the attendant, either from the patient having forgotten it, or not considering it of importance to make it known to him.

Mollities ossium, as its name implies, is a softening of the bones, and may attack any portion of the osseous system; but the pelvis most generally suffers from its ravages, which produce every degree of distortion.

This disease is usually progressive, and sometimes remains stationary, except during pregnancy, when it rapidly increases. It very seldom (yet it sometimes) happens that the distortion of the pelvis is so great in a first labour as to require either craniotomy or the Cæsarean section for delivery. The usual course of this malady is to produce an additional degree of mischief during each succeeding pregnancy, thereby rendering necessary a different plan of delivery in each succeeding labour. The obstetrician may, and ought, to avail himself of the knowledge he has had the opportunity of practically acquiring of the degree of distortion at any previous labour, to bring it to bear on, and to guide, his judgment as to what method should be pursued during the succeeding pregnancy or labour. An accurate inquiry during one labour, with a careful examination of the pelvis in the early months of the next pregnancy, will be all-sufficient to direct him in his treatment of the case. In a first pregnancy he has not this information, and, therefore, he stands in a very different position in regard to his professional responsibility. Extreme distortion of the pelvis from mollities ossium may exist, and yet every other bone may be free from disease. The pelvis, in Sir C. Bell's case, was extremely distorted; but the skeleton was of average height, and the bones, especially the thigh-bones, were firm and of full size.

It is true the general health suffers in a greater or less degree during the progress of this disease, and pains like those of rheumatism are felt about the hips and lower part of the back, and the patient's gait becomes different, and her stature becomes less.

If a woman, for the first time pregnant, applies for professional attendance in her approaching labour, at the fifth, sixth, or seventh month, and on inquiry she complains of the pains above mentioned, and the other effects of the disease are to be observed, then there can be no doubt as to the wisdom of making an internal manual examination of the pelvis; but in many cases such an application is not made until a later period of pregnancy, and frequently even then no state-

ment of local pains is made to the practitioner. He may be a stranger to her, and unacquainted with her former gait or stature, and he must, therefore, be unable to make a comparison of her present with her previous state. Women in the lower ranks of life usually employ midwives, and therefore medical gentlemen are seldom or ever consulted until the labour has continued for some time, when some serious impediment to its advance is found to exist. From the previous remarks it is quite obvious, that no knowledge of the existence of extreme distortion can be acquired in many of such cases, until after the commencement of labour, when suitable measures for delivery can only then be determined on. But even in cases in which this knowledge may be, or has been obtained, there is no alternative for the Cæsarean section.

A question will no doubt arise in the minds of those who have not had to manage labour obstructed by distortion of the pelvis—Cannot a manual examination of the pelvic diameters be made with such mathematical accuracy, and a decided opinion formed whether the child's head will pass through it?

An accurate exploration of the pelvis is at all times of the greatest practical importance; but, notwithstanding the best endeavours are used precisely to ascertain its capacity, there is great danger of an erroneous computation, especially when it is distorted. The manual difficulties are great under all these circumstances, but are more so when the brim has assumed the triangular shape. The examination should not be confined to the brim-cavity or outlet; but the measurement of every division of it must, as far as possible, be accurately obtained. When it is intended to induce premature labour, we should compute the pelvic space, in relation to the size of the fœtal head, at the period of pregnancy at which the operation is to be done. So when craniotomy is decided on (as a rule of British practice), the space must be relatively considered; and, at the same time, it must be remembered that the reduction of the fœtal head cannot be effected beyond certain limits.

Abortion.—The induction of abortion is one of the operations proposed to prevent the necessity of the Cæsarean section; but, in the opinion of the writer, it can only be justifiable to have recourse to it in a first pregnancy.

But it is not alone on moral grounds that this procedure is considered inadequate to meet such a proposition. It is physically impossible safely to perform this operation in most of the cases of extreme distortion of the pelvis, especially in those which have a triangular shaped brim.

An experienced practitioner unsuccessfully attempted to destroy the ovum. The woman afterwards died. The pelvis is in my possession, and is an example of the highest degree of distortion from mollities ossium which was ever presented to my notice.

Other cases of a similar description are on record in which the same results happened. Medicines have been administered to produce abortion in these cases, but the practice is unwarrantable and dangerous. One woman died after taking *secale cornutum*, but in her case an instrument had been first used. Mrs. Sankey, one of the

women already mentioned, who recovered after the Cæsarean operation, became again pregnant. She took, by the direction of her medical attendant, the *secale cornutum* and *infus. sabinæ*, for the purpose of inducing abortion, but it is said they failed to produce it. In more than a month after its discontinuance, she aborted a two months' fœtus; the placenta was retained; *secale cornut.* was given; on the third day it was reached by the finger and extracted. She died in about five days after the expulsion of the fœtus.

Premature labour.—Premature labour is to be induced, not so much for the purpose of superseding the necessity of the Cæsarean operation, as it is to prevent the use of the murderous instruments, the perforator and crotchet. Whenever the pelvis is so much distorted as to prevent the passage of a full-grown infant without the aid of craniotomy, but will permit one that is premature and viable, this operation must be performed before the end of pregnancy. The longer gestation is allowed to proceed without interruption, the greater chance is afforded to the child to live; but the period at which labour ought to be induced, must depend on the degree of distortion of the pelvis. The great consideration here is the probability of the birth of a viable infant. Most writers assert that it has not the power of maintaining an independent post-partum existence until the seventh month of pregnancy. I venture to differ from this opinion, and do not unconditionally accept this limitation; but I think that a shorter period of intra-uterine life would, in many, if not all cases, enable the infant afterwards to exist. I have known one, not larger than at six months, survive; and another, not more than six months and a half when born, lived to be ten years of age. Cases are recorded of viable infants born at the above-mentioned periods.

The performance of this operation is justifiable on moral grounds, and it is sanctioned by every professional and social principle. Its object is noble; it saves a life which must otherwise be destroyed; and, at the same time, the woman incurs not much—from my own experience, I can say no more—risks than those which are contingent on ordinary parturition. But, notwithstanding the high value of this operation, it is not warrantable unnecessarily to have recourse to it. Errors (as already stated) in computing the pelvic space may be made. This opinion is corroborated by a case which occurred in the practice of the late Dr. James Hamilton, briefly related by me in 'Prov. Med. and Surg. Journal,' vol. ii, 1847, p. 404.

Craniotomy.—It has been asserted that delivery can be accomplished by the use of the perforator and crotchet in all cases of extreme distortion of the pelvis. The following remarks will prove that this statement is not borne out by facts. In some cases of this kind the head could only just be reached, and with great difficulty (to say nothing of the danger) perforated. But this done, the power of the operators ended; all further efforts made to reduce and extract it completely failed.—“Awful catastrophe!”

A consultation was held on the case of a poor woman in labour. Most of those present were Anti-Cæsareanists, and therefore they decided on craniotomy. The head was, with great risk, just opened with the perforator; but every other effort made to deliver this poor

suffering creature was unavailing. She was allowed to endure the anguish of parturient pains until the uterus ruptured, and death terminated her agony. The pelvis was greatly distorted by mollities ossium, especially the outlet; and there is no doubt in my mind an erroneous and partial measurement had been made: most likely the brim had been only attentively examined. A cast of the pelvis is in my possession.

In one case, after the head of the infant had been perforated, the Cæsarean section was performed, and it was extracted half murdered.—“Awful catastrophe!”

In another case, after mutilation by embryotomy, the infant was extracted by the Cæsarean section.—“Awful catastrophe!”

Others of a like nature are to be found on record.

In many of the women who have undergone the Cæsarean section, neither the os uteri or the presentation of the infant could be felt. Under such circumstances, how could craniotomy be done? This is the only operation recognised and justified by the British profession which is undertaken with the intention of destroying life. It is only between the value of craniotomy and the Cæsarean section that a comparison need be made. I have been anxious to undertake this important inquiry; and, as statistic deductions are so much in vogue at the present day, I put out a letter in the ‘Provincial Medical and Surgical Journal,’ October 17th, 1849, requesting the members of the Association to kindly send me a statement of all the cases of craniotomy which had happened in each of their practices. But sorry am I to say, only three or four gentlemen have had the candour to communicate information on this subject. It has been said that the statistics of Cæsarean section are worthless; but how, I cannot understand. Those of craniotomy are completely valueless; hundreds of such cases have been silently consigned to the grave.

Instead of trying to explode the Cæsarean section (as now practised in Great Britain), which the foregoing observations prove cannot be done, we ought rather to extend its adoption. I stand fearlessly forward as an advocate for its performance, not only when the woman cannot be delivered by craniotomy, but also in other cases.

I consider that the Cæsarean section should be approved as an operation of election, and not as it now is, one of necessity; and that craniotomy ought to be received in the reverse order.

ART. 84.—*On the Pathology and Treatment of Puerperal Insanity.*
By F. W. MACKENZIE, M.D.

(*London Journal of Medicine*, June 1851.)

[The object of the present communication is to point out the frequent connection of puerperal insanity with an anæmic condition of the system. The author after some general observations in reference to this point gives the following account of the symptoms of this disease:]

Symptoms.—When mania occurs during the puerperal state, its accession is, in some instances, sudden, as where some violent mental

emotion has been the exciting cause; but more frequently it is otherwise, and it is ushered in by certain premonitory symptoms. Of these, one of the most frequent is restlessness or sleeplessness at night, a symptom which almost invariably precedes the full development of the disease. The patient at the same time is often excitable during the day, and evinces some peculiarity or other. She may express herself as feeling unusually happy, or otherwise; there may be a degree of vivacity about her which is unaccustomed; or, on the other hand, she may be excessively reserved. One patient will be constantly talking, while another will be sullen and taciturn, and there is often some strange fancy or idea upon which she more particularly dwells. The pulse at this time is generally quick; but it is weak and easy of compression, and although the head may be hot and the countenance flushed, the extremities, and especially the feet and hands, are either cold or below the average temperature. Up to this period the patient appears to be rather eccentric than mad; she is easily managed, and readily does what she is advised; but after a time she becomes more positive, more impatient of contradiction, and at length violent and unruly. Her nights are now passed without any sleep, her countenance is flushed and excited, her head hot, and her eyes suffused. The tongue is mostly furred and dry, but it may be clean or covered with a slimy mucus; the breath is often offensive, more especially in the morning; the bowels are torpid, the stools unhealthy, and the urine scanty. With the development of these symptoms the delirium rapidly increases, and the case, so far as the cerebral disorder is concerned, presents very little difference from that of ordinary mania. The state of the circulation is, however, still peculiar; the pulse continues weak and quick, the extremities are cold and clammy, and the patient, unless excited, evidently suffers from prostration.

The progress and termination of the attack may vary. It may terminate in spontaneous recovery, or it may be followed by protracted insanity, and, in some instances, may prove fatal. When such is the case, the *post-mortem* appearances are generally of a negative character.

Pathology.—[The author expresses his opinion that the origin of this disease is connected with a defective condition of the blood, and quotes Gooch, M'Clintock and Hardy in corroboration of its truth. He also mentions a case by Abercrombie, which had been treated as meningitis, but recovered under the use of stimulants. He then proceeds to say:]

“The cases which have come under my own observation have appeared to be essentially similar to those related, and to have originated remotely, and principally, in a defective condition of the blood. In all, anæmia had existed concurrently with the attack, as well as antecedently to it. In one patient, with whose previous history I was well acquainted, it had existed during the greater part of pregnancy, and was probably the sole cause of the mania. In another it was apparent when the patient was suffering from the malady, which disappeared under treatment calculated to improve the general health. But it reappeared some months subsequently, not as the effect of child-bearing or its consequences, but as the result of a return of bad health,

and an impoverished state of the blood. Many cases of this form of mania have been admitted, during the last three years, into the Paddington Infirmary, in females who had been suckling their children under circumstances of much privation: in all of them, anæmia existed in a marked manner, and the intensity of the cerebral disorder, as well as the danger, was found to be proportionate to the degree in which the blood had been impoverished.

“That this condition of blood should favour the occurrence of puerperal insanity, would appear probable from many circumstances. In the first place, it is obvious that for the healthy performance of the functions of the brain, it is necessary that there should be a due supply of healthy arterial blood, and that this supply cannot be diminished in quantity or deteriorated without disorder. That the brain is an organ receiving a very great supply of blood; that its vessels are large and numerous; that an increased determination of blood to it, or, on the contrary, a diminution of the quantity conveyed to it, must have an effect upon the cerebral functions; and that the perfect or imperfect state of the intellectual and nervous powers is intimately dependent upon the condition of the circulation within the head, are facts of which no doubt can be entertained. Hence, amongst the frequent consequences of anæmia, may be mentioned an extremely irritable condition of the brain and nervous system. In some cases, this amounts to actual disorder; in others, to a susceptibility, which only requires some casual circumstance to develope into positive disease. Thus, in puerperal patients, when greatly anæmiated, mania may occur as the result of the mere shock and consequences of labour. But when the blood is less impoverished, additional disturbing causes may be necessary; and those which would produce it in a puerperal patient, are similar to those which would occasion it in the non-puerperal state. Of these, mental agitation, shock, or emotion, loss of blood, and irritations of various organs reflected upon the sensorium, particularly of the stomach, liver, and intestines, are the most potential; and the cerebral disorder induced by these anæmiated non-puerperal persons, is precisely similar to the mania of the puerperal state.

In the second place, the general symptoms attending puerperal mania, are identical with those which are met with in anæmia. The brain and nervous system, it is true, are in a state of extreme excitement; but the condition of the patient generally is one of weakness and exhaustion. The pulse is small and quick; the extremities cold; and the excitement has been truly characterised as “action without power.” Moreover, in all the cases which I have seen, loud continuous murmurs were heard over the cervical veins, as well as those cardiac sounds, which are indicative of an attenuated state of the blood.

In the third place, the progress of the disease does not materially differ from various cerebral affections, which are occasionally met with in anæmiated patients; and whilst in each the tendency under favorable circumstances is to recovery, in either the reverse may happen from very similar causes. Thus, in either, congestion of the brain may occur from feebleness or irregularity of the circulation; and, consequent

upon this, effusion may take place, leading to a fatal termination. When, again, the malady is protracted, various organic changes may be induced to the brain and its membranes; and these may give rise to permanent insanity, epilepsy, or paralysis.

Treatment.—[In the treatment of puerperal insanity, the author speaks of the importance of endeavouring to prevent the attack by obviating causes of anæmia previous to and during labour, also by preventing shock to the nervous system. The curative treatment is directed to the following points:]

First. The removal of any exciting causes which may exist, and of any bodily derangement which may have been instrumental in the causation of the disease.

Secondly. The subdual of cerebral excitement, and the restoration of tranquillity to the nervous system generally.

Thirdly. Guarding against the occurrence of congestion, effusion, or other disease of the brain.

Fourthly. Supporting the constitutional powers, restoring the general health, and improving the condition of the blood.

1. The first indication points to the removal of such exciting causes as may have been concerned in the production of the disease. It has been remarked, that these are referable to two heads: the one operating directly upon the mind; the other consisting, for the most part, of various kinds of irritation in remote parts of the body. When mere emotion has been the exciting cause, and no physical disturbance can be discovered, it is probable that a full opiate, together with extreme quietude, and the constant application of ice to the head, may at once overcome the cerebral excitement, and avert any further bad consequences. It must, however, be remembered that opium is contraindicated, whenever gastro-intestinal irritation exists as a consequence of the presence of crude, unhealthy, or indigested matters in the stomach or intestines. When, therefore, the tongue is furred, the breath unpleasant, the alvine discharges scanty and unhealthy, as also when the abdomen is tumid and uneasy,—evacuant medicines should precede its administration. If gastric disorder exists in a marked manner, there can be no question as to the advantage and safety of giving an emetic, for the purpose of effecting the direct removal of gastric impurities; and ipecacuanha, with squills with or without the tartrate of antimony, according to the strength or debility of the patient, answers well for this purpose. Full vomiting will generally follow its exhibition; and if solid matters, such as undigested food, be not thrown up, there will often be an evacuation of vitiated, unhealthy secretions, in large quantity, which will be productive of much relief. Having premised this step, the next should be to act upon the liver and bowels, not only for the purpose of carrying off irritating matters, but of promoting secretion from them, as well as elimination. Calomel and jalap combined are extremely efficacious for the purpose, and should be given in full doses; but when they fail, or are otherwise objectionable, I believe that croton-oil, with the watery extract of aloes, and a little Castile soap, will be found of signal service. I have certainly found this to answer well in these cases. It also should be given in decided doses, and repeated every four or six hours, until

the necessary evacuations have been obtained. These will generally consist of a number of fetid and unhealthy stools; and, when they have been voided, the symptoms will often manifestly improve, whilst the further management of the case will be considerably simplified.

2. The second indication refers to the necessity of allaying the inordinate cerebral excitement, and of restoring tranquillity to the nervous system generally. These objects will be best attained, the former by the exhibition of tartar emetic in small and frequently repeated doses; the latter by opium, morphia, henbane, or some other narcotic. The tartrate of antimony may be given to the extent of one sixth or one eighth of a grain every half-hour or hour, until the desired effect is produced; and it is sometimes advantageously combined with small doses of the sulphate of magnesia. Any disposition to vomiting may be obviated by the addition of the hydrocyanic acid; and some have found it useful to add a few drops of the tincture, or sedative solution of opium, to each dose.

The administration of opium, in these cases, requires much caution, and careful consideration of the circumstances. Opium, I would observe, has a twofold action upon the economy; and each is distinct and dissimilar. Upon the functions of animal life it operates as a sedative; upon those of organic life, as a stimulant; and thus, whilst, on the one hand, it lowers inordinate action of the brain and spinal cord, it tends, on the other, to exalt the activity of the vascular and organic functions. Hence, its efficacy is greatest in those cases in which the sanguiferous system is most depleted, and the vital and organic functions are most depressed; and, conversely, its employment is least proper where there is a tendency to vascular fulness, whether general or local, and more especially of the encephalon. In proportion then as the pulse is rapid and weak; in proportion as organic debility prevails, and there is an absence of cerebral congestion or determination,—is its use indicated in this disease; and, whatever may be the intensity of the mental excitement, in such cases it may be given fearlessly and freely. When, however, these conditions do not exist unequivocally, as will happen in the majority of instances, it must be had recourse to more guardedly, and its action modified according to the particular circumstances of each. "Opiates have been given with two intentions," says Denman; "some have merely proposed to soothe and moderate the violence of the disturbance by the frequent repetition of small or moderate doses; others have aimed, by the more liberal use of opium, often repeated, to suppress the irritability altogether. As far as I can judge, the former method is far preferable to the latter; and I think there can be no doubt but that opiates in larger doses, instead of diminishing, add, in no small degree, to the irritability which before existed."* It is certainly impossible for any one to lay down a rule, applicable to all cases, for the administration of opium, or any other narcotic, in this disease. I have found full doses at bedtime, with smaller during the day, to answer well in some instances; and it is sometimes useful to alternate the use of one narcotic

* Denman. Introduction, &c., Seventh Edition, p. 503.

with that of another. Tranquillity and sleep are the great desiderata to be attained; and different medicines, and different modes of exhibiting them, will be required in order to attain this end in different cases. It is, however, most necessary to watch the effect of such remedies, and not to push them beyond certain limits, when their efficacy is questionable, merely in deference to popular custom or opinion.

As auxiliary to these measures, the pediluvium, sinapisms to the calves of the legs, and revulsives to the extremities, may often be had recourse to with advantage.

3. The next indication to be attended to, is to guard against the occurrence of congestion, effusion, or other disease of the brain. Such consequences might frequently be anticipated from the extreme cerebral disturbance going on; but, under proper treatment, they are fortunately rare. Nevertheless, the possibility of their occurrence must not be lost sight of; and every precaution should be taken to avert them. The state of the circulation in these cases generally forbids the employment of active measures; general bloodletting is, for the most part, inadmissible, and hence abstraction of blood should be limited to the application of a few leeches to the temples or behind the ears, when circumstances render local depletion necessary; but the constant application of ice to the head, the free use of purgatives, a careful diet, and tartar emetic in contrastimulating doses, is safer practice, and will generally obviate all danger on this score.

4. The last indication points to the necessity of sustaining the patient, restoring her general health, and improving the condition of the blood. These are matters of the utmost importance; and, upon their due fulfilment will her recovery mainly depend. The means to be employed for these objects comprise all those measures of diet and regimen which appertain to the treatment of anæmia. The patient should be placed in a large, cool, and well-ventilated apartment; her diet should be carefully attended to, and this, in the early stages of the disease, should consist of light, unstimulating food, administered regularly and frequently, but in small quantities at a time. While there is much heat of skin, a quick pulse, and great excitement, milk, gruel, arrowroot, and sago, or other farinaceous articles, form the best diet. As the excitement and febrile disturbance subside, a little animal food, or fish, may be added; and, if the extremities should become cold, and the pulse very feeble, wine must be given in addition, and this sometimes largely. In severe cases, it will be necessary to check the drain upon the system occasioned by lactation; and for this purpose, evaporating lotions should be applied to the mammæ, whilst the bowels are kept open by saline aperients. In conjunction with these measures, the patient must be kept perfectly tranquil. All interviews with friends and relatives had better be prevented; conversation should be prohibited; and a regular nurse, accustomed to the care and management of the insane, should be in constant attendance. It is unnecessary to add, that so long as the patient is under the influence of any mental delusion, she must be strictly watched, and every thing kept out of her reach, with which she might do injury to herself or others.

Under this system of management, the progress of the case will generally be satisfactory; and, as the general health improves, the mental aberration will disappear. Should it be otherwise, additional measures for the restoration of the health will be necessary. Change of air will prove serviceable, and recourse may be had to tonics in addition to the regimen laid down. Of these, it would be advisable to commence with the mildest,—such as the mineral acids, or some light bitter; and, afterwards, to prescribe the more powerful,—such as quinine, or some of the preparations of iron.

ART. 85.—*On Relaxation of the Symphyses of the Pelvis, and its Treatment.* By M. MARTIN.

(*Gazette Médicale and London Journal of Medicine*, Nov. 1851.)

Parturition is sometimes followed by persistent relaxation of the various symphyses of the pelvis. As it commonly arises from the patient leaving the horizontal position too soon, as various sympathetic symptoms accompany it, and as other lesions may coexist with it, it is not surprising that the nature of the affection should have been mistaken, sometimes for engorgement of the neck of the uterus, sometimes for retroversion of that organ. In persons thus affected, standing erect is peculiarly difficult, and sometimes almost impossible. In spite of using crutches, they feel severe pain in the sacral region, with stiffness in the lower limbs. In general, they are obliged to sit down, after making from ten to twelve steps. This exercise frequently, by causing the two surfaces of the symphysis pubis to play against each other, produces an irritation of the tissues surrounding the urethra, and causes pressing and painful attempts at micturition. The ischia and ilia can also be felt with the hand to have an abnormal degree of mobility. If it be remembered, also, that the impediment to walking and standing commenced near the end of pregnancy, it becomes certain that the permanent relaxation of the pelvic symphyses is the cause of all the symptoms.

M. Martin has observed, that if the iliac bones be kept pressed against the sacrum, the power of walking is almost entirely restored. The apparatus which he uses consists of a large steel band, padded on the inside, embracing the whole circumference of the pelvis, passing over the external iliac fossæ, in the space between the crest of the ilium and the great trochanter. One lady, who could not walk twenty steps without being obliged to sit down twice or three times, was enabled in two days to walk about a large garden without aid.

It must be remembered, that the impediment is often trifling, and not always very easy to be recognised.

In one exceptional case, the band could not be left off. M. Martin advised the patient to wear it throughout her next pregnancy; and to remain in bed with it on for two months after her confinement. This was done; and in two years she could easily walk a great distance without it.

ART. 86.—*On the Operation for Vesico-Vaginal Fistula.*
By Dr. HAYWARD, Philadelphia.

(*Boston Medical and Surgical Journal*, and *Provincial Medical and Surgical Journal*,
October 29, 1851.)

[This difficult operation is, according to the author, much facilitated by the following method:]

The patient being previously etherised, the bladder is brought down by introducing a large sized bougie (one made of whalebone, highly polished, is to be preferred), into the urethra, to the very fundus of the bladder, and carrying the other end up to the pubis. In this way the fistula is readily brought in sight. Its edges can be pared with the scissors or a knife, though usually both these instruments are required; and this part of the operation is much facilitated by holding the edges by means of a double hook. It is not difficult to dissect up the outer covering from the mucous coat of the bladder to the distance of two or three lines. The needles are then to be passed through the outer covering only, and as many stitches must be introduced as may be found necessary to bring the edges of the fistula in close contact.

Since his first operation the author has used a short needle with the eye near the point, made to fit to a long handle. The instrument, when the two parts are together, looks not much unlike a tenaculum, though not so much curved, and considerably broader near the point.

As soon as the needle is passed through one side of the fistula, it is immediately seized by a forceps, the handle is withdrawn, and the needle is then carried through. It is to be then again fitted to the handle, and carried through to the other side in the same way. As many stitches as may be thought necessary to bring the parts into close contact can in this way, be taken with great ease. One thread of each stitch is to be cut off; it is convenient to leave the other, as it enables the operator and patient to know when the ligatures have separated from the bladder.

A large-sized female catheter is then to be introduced into the bladder, and secured there by means of a T bandage. The patient should be laid on her side, with the upper part of the body somewhat raised, so as to facilitate the flow of water through the catheter. This should be removed at least once in every twenty-four hours, as it is very likely to be obstructed by mucus, coagula of blood, and by occasionally calculous concretions. In three days it is safe to remove it altogether, but then it should be introduced at least once every three hours, for ten or twelve days more, so as to prevent any accumulation of urine in the bladder, and consequent strain on that organ.

The diet should consist entirely of liquid, mucilaginous food; such as an infusion of slippery elm, gum Arabic and water, flaxseed tea, arrowroot, and milk and water. This diet, in the author's opinion, should be continued till the ligatures come away.

The bowels should be opened by some mild laxative a few hours before the operation; but it is desirable that they should not be moved again till some days after.

The author states that he has never had any troublesome hæmorrhage from the operation, nor any alarming symptoms after it. In some cases the pain has been severe for two or three days, and once or twice it has run down the limb, apparently in the course of the sciatic nerve. When performed in the way that he has recommended, he believes it to be attended with very little, if any, danger, as the bladder is not subjected to any considerable degree of violence, nor any part injured to a great extent.

ART. 87.—*On the Use of Cod Liver Oil in Nursing Sore Mouth.*
By Dr. JOHN EVANS, (U. S.)

(*North-Western Medical and Surgical Journal*, April 1851.)

The extensive prevalence in the West of a form of disease in women generally attending the period of lactation, which has in consequence acquired the name of "nursing sore mouth," and the general want of satisfactory success in its treatment, have induced the author to give the result of his observations upon its nature and management.

The disease generally affects females of delicate constitution and spare habit, in which the function of assimilation is but imperfectly performed. It not unfrequently makes its appearance in such during the last months of gestation, but much oftener during the period of lactation.

The diagnostic symptoms are a burning sensation in the mouth, as if it had been scalded, which is greatly aggravated by hot drinks, attended at first by but little redness, and followed by small ulcerations upon the tongue and different parts of the buccal cavity. In some cases, instead of these ulcers, there is a diffused redness of the mucous membrane of the mouth. These symptoms are generally attended and often preceded by a burning sensation in the stomach, pyrosis, indigestion, and occasionally vomiting. The bowels are most frequently relaxed, and in some cases an obstinate diarrhœa attends.

The course of the disease is often variable, sometimes for a few days being almost entirely relieved, and again recurring. As has been observed by Prof. Brainard, it is often attended by ulcerations in the vagina and upon the mucous surfaces of the labia, which generally grows worse as the irritation of the mouth subsides, and *vice-versâ*. The wasting of the system often continues, if the child is kept at the breast without the function of nutrition being improved by regimen or treatment, until the patient sinks and dies of marasmus and its attendant local lesions.

Nursing sore mouth is a disease of debility, consequent upon the marasmus produced by imperfect nutrition and the demand upon the system of gestation and lactation, and generally speedily gets well after weaning the child, unless it has continued so long as seriously to have

impaired the function of nutrition. Profuse hæmorrhages and copious lochial discharges favour its development.

Treatment by a resort to medication, especially mercurial, generally aggravates rather than relieves the disease. Although, in some instances, symptoms may be temporarily palliated by the use of the bitter tonics and astringents, such as nitrate of silver, tannin, &c., the author thinks, in the end, they do more harm than good, as there are few, if any, of this class of remedies that do not, under the circumstances, ultimately act as irritants. The ulcers in the mouth may generally be promptly, but temporarily, relieved, by the application to each of a little pure muriatic acid, applied by dipping a small point of a feather or a pencil in the acid, and touching it to the ulcerated surfaces. Although they speedily heal after this application, others soon make their appearance, unless the general condition of the system is relieved.

In some instances, after having failed to relieve either the diarrhœa or irritation of the mouth by the ordinary means of treating these symptoms in other cases, the author has observed a marked improvement by abandoning medication altogether, and placing the patient upon an animal diet and the free use of mucilaginous drinks.

Observing the influence of cod liver oil in preventing the wasting of the tissues of the body in cases of marasmus, especially from phthisis and tabes mesenterica, it occurred to the author that its influence might be equally beneficial in the disease in question. The diarrhœa and ulcerations of the mucous surfaces being in many cases similar to those produced by the marasmus in those affections. He has accordingly been in the habit of prescribing it, taken in French brandy or malt liquor, as might be found best suited to the taste or most convenient, and generally with the happiest effects. Where the patient can be induced to continue its free use, it has uniformly proved beneficial, and, in most instances, effected a cure. If treatment should fail to relieve the disease, a resort to weaning the child should never be deferred until the patient loses her strength so that she cannot maintain the erect position.

ART. 88.—*Description of a New Forceps for the Removal of Uterine Polypi, by the combined influence of Pressure and Caustic.* By M. M. O'GRADY, M.D., M.R.I.A., Malahide.

(*Dublin Medical Press*, Aug. 20, 1851.)

The difficulties which have occurred to the author in common with the most experienced practitioners, in operating with the instruments ordinarily employed for the extirpation of uterine polypi, induced him to turn his attention to the construction of a forceps by which the operation might be simplified and effectually performed without the necessity of confining the patient to bed, or of exposing her to the risk of being injured by the presence of the double canula in the vagina during the time the ligature takes to cut through the pedicle;

or to any of the other disagreeable consequences attending this mode of operation.

Having operated seven times successfully with the instrument hereafter described, without causing the least pain, and without the patients losing a drop of blood during or subsequently to the performance of the operation, Dr. O'Grady is induced to lay a description of it before the profession; he also adds a brief account of two cases, which suggested to him the idea of its construction, and of combining mechanical pressure with the action of nitrate of silver upon these morbid growths. The instrument was made under his immediate directions by Thompson and Co., of Henry Street.

The entire length of the forceps is ten inches, and that of the blades, measuring from the pivot to the extremities, five inches and a half, each blade terminating in a semi-tubular chamber, of about half an inch in length, closed and rounded at the extremity, and open at the inner surface, so as to form a groove for the reception of a piece of caustic. Both these chambers having been charged, and the forceps shut, the caustic is completely enclosed; it is thus introduced into the vagina or os uteri with perfect safety. When the blades are separated for the purpose of seizing the object to be operated upon, the caustic can come in contact only with the substance grasped by the forceps. Its action then is two-fold. First, the edges of the caustic chambers break down the vessels of the polypus by compression; and secondly, the caustic decomposes its substance with great rapidity. The forceps is withdrawn as soon as all resistance to its pressure appears to have yielded, and the parts are then washed out with a solution of the carbonate or hydriodate of potash, which decomposes the caustic and prevents its acting on the os or cervix uteri. The patients, with the precautions usually adopted, may safely be permitted to walk or drive out, as if no operation had been performed; at his next visit the operator will find the polypus loose in the vagina, if not already discharged into the night-chair.



SECT. II.—DISEASES OF CHILDREN.

ART. 89.—*Memoranda on Auscultation of Infants.* By Dr. MEREL.

(*Prov. Med. and Surg. Journal*, July 9, 1851.)

[This and the following extracts are taken from an interesting and highly suggestive series of lectures on the diseases of children, now publishing in the above-named Journal:]

The *particularities and difficulties of auscultation* on little children are many:—

1st. The respiration of young children is regularly quick and noisy. This must be allowed for.

2d. There is much propensity to mucous secretion, and as they do not eject it, mucus accumulates, and causes a great many large and fine râles, which veil the respiratory murmur, and impede us sometimes in perceiving the crepitation in pneumonia, or the rubbing sound (*frottement*) in pleurisy.

3d. Mucous obstruction of a large part of the bronchial tubes sometimes takes place, and prevents the perception of the vesicular murmur. This case we enlighten by percussion, as the sound in mucous obstruction is clear, or but very slightly dull. Nor is there true bronchial respiration in these cases.

4th. A little child's chest is of a small extent, consequently if we auscultate, even at the middle of the chest, our ear is struck by the respiratory sounds of the trachea and of the large bronchial tubes, and there is difficulty in perceiving slighter alterations of the sounds.

5th. The child will neither perform a deep inspiration, which sometimes we need to observe, nor will it speak words at our wish and command; thus, bronchophony, pectoriloquy, and œgophony, are lost from us, we can only hear sometimes the modified sound of the voice during cries.

In order to get a full inspiration, as full as the child can perform it, I find the best plan the following:—I order the child to be taken in the arms of its mother or nurse, in a position which allows auscultation, behind and laterally; then I approach cautiously from behind, and lay one of my hands on the upper part of the abdomen, and exert with it a gradually increased pressure, thus the abdominal viscera pushing the diaphragm upwards, the child exerts its power to overcome this impediment by a more extensive inspiration. If this act is prevented by pleuritic pain, we perceive it by its anxiety or irascible struggle with its trunk and hands, and by moans and cries, as far as they are possible. In this manner we should always assist the physical examination of the organs of the chest. The *percussion*, on the contrary, is the most enlightening means of examination in children. The walls of their chest are thin and flexible, consequently we perceive more immediately the sound of the pulmonary texture, and even its consistence.

If we are aware of the above-mentioned circumstances, by and by, with patience, careful exercise, and intelligent combination to all that

we see and hear, and of all that we feel with our percussing fingers, we cannot fail to arrive at a high degree of certainty in this sort of diagnosis.

ART. 90.—*On the Varieties of Alvine Discharges in Children.*
By Dr. MEREL.

(*Provincial Medical and Surgical Journal*, Aug. 6, 1851.)

[The intestinal discharges mentioned by the author are:]

1. The *yellow* discharge. This is the regular kind of stool in infants. It is a mixture of intestinal secretions with bile. As children advance in age, and begin to take substantial food, the colour of their regular discharge becomes more and more of a light brown colour.

2. The *mucous* discharge. White mucous matter, more or less thick or liquid, and mixed with serum, sometimes with a proportion of bile. This discharge is preceded by but moderate pains, and frequently by no pains at all. It denotes a catarrhus, sub-inflammatory, or irritable state of the intestines, and is almost always of local, and not of sympathetic, origin; in general it is not dangerous, and at its commencement is easily manageable by opiates, warm poultices, and convenient hygiene. If neglected, it becomes pertinacious and severe, and not seldom connected with swelling, softening, or granules of the mucous-membrane, or ulceration of the follicles. If stripes of blood are mixed with the mucus, and pain be present, it denotes a higher degree of inflammation, in particular of the follicles. The highest development in this direction constitutes enteritis or colitis (dysentery).

Sometimes we find among the mucus, consistent *plastic concretions* of a more or less tubular shape, similar to those of laryngeal croup, but larger in proportion to the volume of the intestines. This is the strongest degree of the catarrhus process, which I might term the *croup of the intestines*. Among the whole number of my little patients, which may be about 30,000, I met with this discharge perhaps only twenty or thirty times. The discharge is effected with very painful efforts at a stool.

3. The *serous*. In general, after more or less severe pains, the discharge takes place with a certain rigidity and noise, after which the pains lessen or subside. It consists of an abundant quantity of serous liquid, dirty whitish, yellowish, or greenish, as besides mucus, bile is the most common mixture with the serum. The serous diarrhoea is commonly the effect of rheumatism in the peritoneum, in the serous and fibrous membranes, or in the nerves of the intestines. I found in these cases the abdomen very hot. If a great deal of mucus and some blood are mixed with the serum, we may suspect parenchymatous enteritis; if the serous membrane alone enters into the state of acute inflammation, frequently transudation takes place on its free surface.

I have seen cases of profuse serous discharge, in a very short time, even in less than twenty-four hours, produce collapse and death, and

in some of these instances necroscopy could not discover an adequate alteration either in the mucous or in the serous membrane.

The serous species of discharge is frequently merely a product of sympathetic secretion. I observed it sometimes connected with large transudations in the chest, and with chronic hydrocephalus.

Speaking in general, serous diarrhœa, if even arising from rheumatism, is more difficult to manage than the mucous. Very minute doses of calomel, with Dover's powder and mustard poultices, are frequently beneficial.

Pure serum, like rice-water, is a less favorable quality than the dirty-white or yellowish. Dark-brown serum frequently denotes a disorder in the portal system, present in some severe gastric or typhoid fevers, but I have seen a similar quality also in chronic affections of the brain, and very frequently in scrofulo-impetiginous children. This is worthy our attention, in particular if eczema or impetigo has disappeared from the head and face. This brown and fetid discharge accompanies sometimes the commencement of chronic hydrocephalus. I treated it successfully, in this last case, with high but very diluted doses of iodide of potash.

4. *The green bilious discharge.* If pure bile, then the voided matter is in general not abundant; in young children it is of a more yellowish than green colour. The essential character of bile is, to be of a *greenish colour* (in infants it is voided green) *at the very moment of its evacuation.* This kind of discharge is very frequently present in acute inflammatory and febrile affections; if dependent upon an affection of the brain, then we may find the colour to be rather brown, and the abdomen retracted. If a similar source produces abundant serous-bilious discharges, then we find the abdomen much collapsed. But I must observe, acute affections of the brain are almost always connected with constipation, only in some cases of chronic hydrocephalus I met with the mentioned diarrhœa. Bilious discharge, as arising from bilious fever, or from derangement of the liver, is rare in young children. In this case the right hypochondrium will be more or less bloated up. We must be careful not to confound the green bilious discharge with the following:

5. *The discharge, like chopped eggs,* mixed with mucus, some clots of bile, and caseous coagula of indigested milk, or other kind of food, accompanied almost always by gripes and flatulence; its smell is disagreeably acid, and the whole matter, some minutes after being discharged and *exposed to the atmosphere, becomes green.* We know not exactly the chemical change which produces this colouration, it seems to be an oxydation of some of the elements. Then the essential character of this discharge is, that it is yellow at first, and becomes green by exposure to the atmosphere, whilst bile is green at the moment it comes out. I shall call this *the acid saburral discharge*, which is the most obvious before the sixth month of age, in particular if the sucking child takes, besides the milk, some farinaceous food. Practitioners commonly prescribe in this case rhubarb, with magnesia. For my part I prefer, in tender infants, to rely more upon a convenient change in the diet, and as a remedy, aromatic frictions of the epigastrium, and internally bicarbonate of soda, dissolved in mint water.

6. The *bloody discharge*. Pure red blood is seldom discharged by children; in some rare cases I have seen half or one table-spoonful come out, as the product of active congestion and hæmorrhage. Very frequently, on the contrary, blood is combined with the mucous discharge, and in this case, if it is preceded by pain, without tenderness, it denotes an inflammation in the upper parts of the intestinal tube, at least not near the rectum. Tenesmus signifies that the seat of the inflammation is in the lower parts of the colon, or in the rectum. This form is commonly called *dysentery*, not dangerous, if it is without bilious complication and fever, and if treated in its early stage with Dover's powder, some doses of castor oil, and warm poultices; in a stronger degree leeches at the anus; but if neglected in the commencement, it becomes dangerous to the life of the child. Professor Rokitansky, of Vienna, describes most exactly what he calls the "dysenteric process," in three gradual degrees of anatomical change. The highest degree, presenting a dirty red and gray marbled surface, with considerable thickening, granulation, and ulceration, I never saw in the tender age. Young children die before this stage is developed.

Passive hæmorrhage of the intestines very seldom occurs in children. I have seen, however, some cases where, without adequate pain, a considerable quantity of dark thin blood was discharged. Lastly, we have seen in this town, with Mr. Wilson, a case in a child six years old, where, during the course of a gastro-typhoid fever, more than one pint of carbonised blood was discharged in two days. The case recovered. The boy is affected with an enlarged spleen.

Moderate quantities of red blood, discharged without pain, frequently occur, mixed with mucus, and are, without signification, sometimes even connected with the advance of recovery from gastric affections. This is the same case as with epistaxis.

Golding Bird and Simon state, as the result of chemical analysis, that some dark green stools of children owe this colour to blood which has suffered a certain chemical change; but those chemical inquiries are not yet arrived at a satisfactory exactness; we do not even know exactly what kind of green discharges were the subject of these inquiries.

7. *Calomel stools*. Green, more or less thick, or mixed with serum, and in this case more abundant, produced by full doses of calomel. Calomel stools resemble bile, and contain much bile, but they contain also some particular chemical elements which we do not exactly know. In many instances it happens that the calomel diarrhœa commences some days or weeks after the use of mercury, and we must be aware of this, and not confound it with the primary bilious discharge. In the former case the region of the liver is in general softer than in the latter. A clever practitioner will never try to stop directly, and with astringents, a green discharge, whatever be its origin and nature.

Calomel stools sometimes contain blood. After what I have seen in dissection, I incline to attribute this circumstance to a sub-inflammatory state, with superficial erosions of the mucous membrane, which sometimes take place in children after the continued use of calomel.

[The author states that he considers all these qualitative and physical distinctions of the discharges of children as very imperfect outlines of a sketch, which by farther physical and chemical inquiry can become corrected and perfected.]

ART. 91.—*On a Variety of Infantile Coma.*

By HERBERT BARKER M.D., Bedford.

(*Medical Times*, Oct. 11, 1851.)

Dr. Barker has had his attention directed to a form of infantile coma which has not, in his opinion, been previously described.

Symptoms.—Five cases have been observed, and the symptoms and progress of the disease have been similar in all of them. In every case the child was apparently healthy at its birth. With one exception it occurred in children, where some circumstance or other had rendered it undesirable, or impossible, for them to be nourished at their mother's breasts, and the attempt had been made to rear them by artificial feeding.

Within a few days after birth drowsiness comes on, which gradually deepens into profound coma. At first, the periods of sleep are simply prolonged, the infant arousing at intervals and taking the food presented to it readily, and in sufficient quantity. Gradually the child awakes less frequently, and shows less disposition to take food when offered to it, perhaps relapsing into sleep in the very act of feeding. At length the sleepiness becomes so profound that it is impossible to rouse it sufficiently to take more than half a drachm or a drachm of food at a time. Even while being washed and dressed, the child scarcely awakes. The alvine evacuations were too pale in two cases, slightly relaxed in one case, but in the others healthy. The urinary secretion was apparently healthy,—not high-coloured, not suppressed; whether deficient in *urea* has not been ascertained. The surface becomes cool, and there is increasing difficulty in maintaining its warmth, particularly in the extremities. The action of the heart becomes gradually feebler, and slower. The surface of the body and the conjunctiva become deeply tinged with yellow. The respiration gradually becomes slower, and at rarer intervals suspicious. The body emaciates, and the countenance presents a pinched and somewhat anxious appearance. The pupils are slightly dilated. The anterior fontanelle is depressed, and the skin of the forehead sometimes corrugated; in fact, all the signs of inanition are by degrees superadded. The little patient which had previously shown no indications of suffering, occasionally, before the fatal termination, manifests a disposition feebly to whine, particularly on being moved. No enlargement of the abdomen has been observed.

Causes.—The cause of the coma would seem to be involved in considerable uncertainty, but, in the cases which have come under the author's observation, he is satisfied that it has not arisen from the administration of any kind of narcotic; in fact, the occasion for such medicines has not existed in any one of the cases. In the case of the last patient, for a slightly relaxed state of the bowels, he prescribed a

mild astringent, but studiously avoided any form of opiate, in consequence of the tendency to drowsiness.

The author thinks it is probable that the circulation of bile through the brain may be the cause of the coma; and the fact, that in the cases of recovery the yellow colour of the surface and the coma have disappeared simultaneously, would seem to strengthen this supposition. If this be the cause of the coma, we must still search for the occasion of the derangement of the biliary secretion, and the result of the only successful plan of treatment which he has observed would indicate, that unsuitable food is the primary cause of the mischief.

Treatment.—In the first three cases the author tried in succession several medicines, particularly mild laxatives, mercurial alteratives, and stimulants, but without success, the cases terminating fatally within three weeks after birth. The occasional administration of small doses of spiritus ammoniæ comp. and two or three drops of brandy diluted with water produced a temporary alleviation of the comatose symptoms; this was but transient, and the stupor returned. From the want of success in these cases he was induced to recommend the trial of a wet nurse in his fourth patient, although from the deep sleep, and from the exhausted condition of the system, there appeared but little chance of benefit. Indeed, at first the child could not be sufficiently roused to take the nipple between its lips, even if it had strength to suck; and the milk was allowed to drop into its mouth directly from the nipple. This was slowly swallowed from time to time, and, after several persevering trials, the child began to suck, at first taking but a very small quantity each time. The colour of the surface gradually but quickly improved, the coma very perceptibly diminished from day to day, and within one week the child was in a state of good health.

In the fifth case, which occurred a few weeks ago, bearing in mind the success in the last instance, he did not allow the artificial feeding to be persisted in so long, but, on the third day from the appearances of the drowsiness, which was daily increasing in intensity, directed a wet-nurse to be procured, and had the satisfaction of observing a speedy subsidence of all the unfavorable symptoms from the moment the child began to suck.

Whatever may be the explanation, the author does not doubt that the unsuitableness of the artificial food is at the root of the mischief in these cases. We know that cases do occasionally present themselves in which artificial feeding, however judiciously it may be pursued, will not suffice to sustain the life of the infant. Whenever the train of symptoms which he has described should present themselves, he strongly recommends a *healthy wet-nurse* to be procured, if possible, as the only reasonable chance for the little patient.

The author also recommends this plan to be pursued, should the same symptoms occur in a child nursed by its mother; the presence of these symptoms would sufficiently indicate that the milk was unsuitable and justify the change.

ART. 92.—*Successful Treatment of Croup by Cauterisation of the Larynx.* By Dr. TOWNSHEND.

The author was called to a little girl, æt. five years and a half, who had been suddenly seized with croupy breathing shortly before. She was treated with Dover's powder repeatedly during the day, and the room was filled with vapour by immersing heated irons occasionally in a tub of hot water. Cauterisation with nitrate of silver was practised at noon and in the evening without much relief; at twelve P.M., the croupy respiration increasing, the patient was fast sinking from suffocation; the pulse intermittent; the caustic was more effectually applied. Expectoration of a portion of the membrane, an inch in length and half an inch wide, followed in fifteen minutes; relief was immediate; ether was also inhaled with a happy effect, producing a pleasant sleep. Several portions of membrane were expectorated during the night and the following day, and the respiration became natural. No patches of lymph upon the tonsils or fauces were discovered. At this time, seven days from the attack, the patient is playful, with a good appetite. Expectoration purulent and bloody. Has had no return of dyspnœa, but still speaks only in a whisper.

American Journal of the Medical Sciences, July 1851.

ART. 93.—*On the Comparative Value of Cochineal, Fumigations with Cherry-laurel Water, the Use of the Vegetable Acids, &c., in the Treatment of Hooping-cough.* By Dr. PAVESI.

(*Giornale dell'Accademia Medico-Chirurgica di Torino.*)

In an epidemic of hooping-cough, which prevailed during the entire of the spring of 1850, at Candie (Lomelline), Dr. Pavesi instituted a series of comparative experiments on the value of some of the modes of treatment which have been proposed for this disease. Of 122 children who were under his care, he treated 48 by the ordinary method, 27 by cochineal, 19 by fumigations with cherry-laurel water, 6 by the vegetable acids, and 22 by a mixed treatment. By ordinary treatment Signor Pavesi means treatment according to the indications present; and at first view this would not appear to be the most efficacious method, since of 48 children he lost 10, of whom 6 died of cerebral congestion, 2 of hæmoptysis, and 1 of suffocation. But it is to be observed that, of 48 cases, there were at least 36 extremely severe, in which the author could not venture to employ any of the remedies on which he wished to experiment. In these severe cases Signor Pavesi says, that he has derived benefit from the application of leeches to the chest and bleedings from the arm, but especially from frictions with tartar emetic ointment and croton oil over the chest, and blisters between the shoulders, kept open for some time. 27 delicate and intractable children were treated exclusively with cochineal. It is well known that cochineal constitutes a treatment employed from time immemorial in Scotland, and was proposed as specific by Dr. Wacht, of Vienna. Signor Pavesi prescribed for his little patients the following

mixture: cochineal and carbonate of potash, of each, eight grains; sugar, one ounce; water four ounces: mix. A table-spoonful to be taken every two hours. This treatment was employed alone, with the exception of the administration of a purgative when required. The results were satisfactory; not that the disease was arrested in its progress, or even shortened, but the paroxysms were rendered less intense; and whenever the little patients omitted to take their cochineal, the attacks were more frequent and distressing. They all recovered. 19 patients were treated by fumigations with cherry-laurel water. The majority of them were strong, and were severely attacked. They were treated in the manner recommended by M. Brofferio, with whom this plan of treatment originated; viz., the head was held some feet above a heated vessel, into which two table-spoonfuls of distilled laurel-water were poured, the mouth being kept open to receive the vapour. These fumigations were repeated every two hours. Relief was quickly obtained, the paroxysms were mitigated, and disappeared almost entirely at night, while they became less frequent and less fatiguing by day. However, the disease was not shortened in duration, nor did Signor Pavesi ever see it terminate between the sixth and fourteenth day, as M. Brofferio has stated, notwithstanding the pains which he took to remove all external and internal causes capable of prolonging or aggravating the symptoms. One child only was lost from hæmoptysis, during a fit of coughing. The vegetable acids were exhibited in six cases only, and with patients who were but slightly affected. They were employed as recommended by Dr. Schmitt, of Hengersberg, and by Geigel. Tamarinds, vinegar, lemonade (*ad libitum*), apple-juice with sugar, and syrup of barberries, were given in quantity according to circumstances. The efficacy of this plan was doubtful, and the disease, moreover, lasted six weeks. As to the mixed treatment, it was adopted in cases in which the prolongation of the disease and of its complications rendered it necessary to try different measures. Accordingly, the author lost more patients on this plan than on any other (8 out of 22). In conclusion, the question of the specific treatment of whooping-cough is not perfectly solved, at least as regards the means employed by Signor Pavesi; for it is surprising that this physician did not think of using belladonna, the efficacy of which is at least as well established as that of the remedies he has tried. However, cochineal and fumigation with lauro-cerasus, appear to be remedies not to be despised, and the very simplicity of which justifies their employment in many circumstances in which recourse could not be had to more active treatment.

ART. 94 — *Diagnosis between Infantile Remittent Fever and Hydrocephalus.* By CHARLES TAYLOR, M.R.C.S.

(*Medical Times*, July 11, 1851.)

It is often an anxious point in infantile pathology to determine whether the cerebral symptoms which may be present in a given case are indicative simply of sympathetic disturbance of the sensorium, or of the series of anatomical changes which characterise the disease

known as hydrocephalus. In deciding the question some assistance will be derived from the following summary of the distinctive symptoms in each:

Remittent Fever.

Head, slight pain in.

Delirium at night frequent; convulsion rare—sometimes at onset.

Easily aroused.

Cry fretful, if any.

Hands usually thrown about bed (Coley).

Countenance heavy and dull; vacant expression, as of fever in adult.

Neither knitting of brows nor pupil of eye affected.

Senses of sight and hearing often dull.

Pulse quick throughout the disease.

Bowels occasionally constipated at first; frequently relaxed.

Motions various; often clayey and deficient in bile; very offensive.

Vomiting occasionally at first, but never continuous.

Pain often in iliac regions, particularly the right.

Abdomen in advanced stage sometimes tumid.

Appetite mostly destroyed; will not take anything.

Hydrocephalus.

Head, violent pain in; tossing of; drawn backwards, and bored in pillow.

Delirium seldom; convulsion not early—more towards end of disease; aversion to light and noise.

Roused with difficulty; stertorous breathing; squinting; paralysis in late stage.

Cry peculiar, sharp and shrill; frequent sighing.

Hands tossed towards head.

Countenance sometimes anxious, sometimes dull.

Knitting of brows; wakefulness; pupil of eye contracted in early stage,—sometimes oscillatory, afterwards dilated.

Senses of sight and hearing often acute in early stage.

Pulse quick, but irregular in its action and force in early stage; often beating of carotids, and pulsation and prominence of fontanelle; pulse afterwards becomes slow, but, on raising the child, again quickened.

Bowels constipated, and very difficult to move.

Motions peculiar and characteristic—dark-green and slimy, like chopped spinach.

Vomiting early in first stage; often very constant, especially on assuming the erect posture or sitting up.

Pain occasionally at hypochondrium.

Abdomen drawn in in advanced stage.

Appetite sometimes good, will take food.

Thirst often great from commencement.

Tongue often loaded with yellowish-white fur, in gastric form, and elongated and injected papillæ, giving it a "strawberry appearance;" red, dry, and occasionally brown, in malarial form.

Skin very hot; abdomen hotter than the head; picking of the nostrils, corners of the mouth, &c.

Paroxysms regular; exacerbations towards night, remissions in the morning.

Seldom occurs under three years.

Thirst not great in first stage; often in latter stage great avidity for constant drink.

Tongue white; nothing indicative.

Skin not so hot, afterwards cold; head the hottest part.

Varies in intensity without regularity.

Frequent under the third year; less so after the fifth. More frequent in boys of a scrofulous habit.

ART. 95.—*Treatment of Infantile Remittent Fever.*

By CHARLES TAYLOR, M.R.C.S.

(*Medical Gazette*, Aug. 1, 1851.)

Treatment.—The treatment of infantile remittent fever depends on the form which we have to deal with.

(1.) Where there has been evidence of its arising from improper or over feeding, a brisk purgative will be necessary if the bowels are confined; and for this purpose, calomel, combined with rhubarb or jalap, or by itself, followed by a senna draught, or castor-oil in a younger child, may be given.

After free action of the bowels has been produced, a simple saline mixture, composed of liq. ammon. acetatis, with spirits of nitre, or the solution of nitrate of potass, should be given three times a day. If sickness or nausea are present, the effervescing mixture is preferable, to which a drop of the dilute hydrocyanic acid may be added; generally, however, if there is no nausea, the author gives the sesqui-carbonate of soda, in doses of five to ten grains, three times a day in any vehicle. The bowels may be afterwards regulated by a combination of Hyd. c. Cretâ with rhubarb, given occasionally.

In some cases the commencement by an emetic is useful, as by this means we more effectually clear out the entire intestinal canal.

(2.) In the mild form of the disease the preceding plan of treatment may be adopted, with the exception of substituting for the brisk purgative two or three grains of Hyd. c. Cretâ, followed in the morning by a drachm or two of castor oil.

(3.) The acute form, when uncomplicated, does not require anything further in the shape of medicine, as the author believes it is the best rule not to use any active remedies unless a clear and sufficient indication calls for them.

(4.) When the disease is epidemic, and can be fairly traced to malaria, it will be our first object, as far as possible, to remedy these conditions (remembering that the disease once fairly established cannot be cut short, and our object is to guide the patient safely through it) by having the room well ventilated, clean, cool, and free from extraneous articles of dress; these precautions are equally necessary in all forms of the disease where the character or habits of the patient's friends require it.

The warm bath should be used about 100 to 110 degrees Fah., and repeated every or every other night; it acts not merely by cleansing the skin and promoting its healthy functions, but also by quieting the nervous system, as frequently the author has seen fractiousness and irritability relieved by it, and a more refreshing sleep follow its use. The soda mixture or the other salines may be given, and, as soon as the tongue becomes clean, a mild bitter, as the infusion of calomba with soda, or quinine may be substituted. Dr. Golding Bird, as soon as the remissions are well marked in this form, gives the disulphate of quina, in two grain doses, as an anti-periodic remedy; latterly, he has used the sulphate of bebeerine instead of quinine, with, the author believes, much success. Quinine in smaller doses, simply as a tonic, is very useful; perhaps the more strictly malarial is the attack, and in proportion as it is free from gastric disturbance, the more decidedly useful is quinine.

(5.) If obstinate constipation is present a repetition of the purgative must be had recourse to. Drs. Butter, Pemberton, and Locock, allude to the fact of most powerful and repeated purgatives being required. Pemberton relates the case of a child, aged three years, taking twelve grains of calomel and scammony, and twelve grains of the extract of jalap, but at the same time cautions that they should not be carried to a great length, but merely to remove the contents of the bowels. It is but rare such powerful purgatives are required; and, as Sydenham remarks, we must be careful lest "*sæpius ægro non nisi morte medebimur.*"

(6.) If diarrhœa is present the chalk mixture may be given, to which a small quantity of syrup of poppies, or one or two drops of tincture of opium, may be added. If, at the same time, the motions are clayey and deficient in bile, two or three grains of Hyd. c. Cretâ, or the Pulv. Sodæ Compos. of the Guy's Pharmacopœia, in four or six grain doses, may be given every or every other night. When there is pain, increased on pressure, in the iliac regions, or in any part of the abdomen, and the diarrhœa assumes the character of dysentery, repeated hot linseed-meal poultices should be applied, and may generally be relied on for relief. The mustard poultice might also be tried in the first instance; and in some few cases it might be advantageous to apply two or three leeches or more, but the author has never found it necessary in his own practice. The Hyd. c. Cretâ, gr. $\frac{1}{2}$, or gr. j, with Dover's powder, grs. $1\frac{1}{2}$ or $2\frac{1}{2}$, may be given at bedtime, or repeated twice a day, according to circumstances, together with the chalk mixture. The starch enema, with the addition of half a drachm of syrup of poppies, or four minims of the tincture of opium, is a very useful remedy in these cases.

(7.) In the chronic form, where the secretions are depraved and the appetite bad, the combination of the sulphate of potass with rhubarb is a most useful aperient; and the *Mistur. Rhæi Comp.* (P. G.),—namely, a combination of rhubarb, soda, and calomba, is often of the greatest service. If a mild mercurial alterative is required, *Hyd. c. Cretâ* with rhubarb may be given every other night.

Drs. Loeck and Willshire speak highly of the mineral tonics in this form of disease. Where stomatitic or aphthous ulcerations are present, the chlorate of potass, in five grain doses, three or four times a day, is an admirable remedy, applying also to the part a weak solution of the nitrate of silver, and using a lotion of borate of soda.

(8.) If worms are present, a brisk purgative of calomel and scammony may be given to dislodge the long thread worms, or an enema of lime water for the small thread worm; but, as they depend on the deranged condition of the mucous membrane of the intestines, the object of the treatment will be to remedy that deranged condition, and as it is restored to a more healthy state, and convalescence becomes established, the worms will usually disappear. The compound rhubarb mixture, or the infusion of gentian, may be given two or three times a day.

(9.) For the slight bronchitic symptoms frequently present, the addition of ipecacuanha wine to each dose of the mixture is all that is required. If acute bronchitis or pneumonia should supervene, they must be treated according to general rules. Frequently the indications of circumscribed pneumonia, as shown by dullness and slight crepitation, exist; for them nothing in general is required beyond desiring the nurse to turn the patient frequently. This has been pointed out by Dr. G. Bird, who considers it arising from congestion, and usually vanishes as the patient recovers.

(10.) Should indications of tubercular disease of the mesenteric glands or of phthisis develop themselves, they must be treated accordingly; for the former the liquor potassæ internally, and counter-irritants, as the iodine ointment externally, should be had recourse to; for the latter the author has not much to recommend, except, perhaps, when the stomach will bear it, the regular and continued use of cod-liver oil. In impaired general health, after gastric disturbance with fever, he has seen it of the greatest service.

(11.) The cutaneous affections which sometimes are present require no modification in treatment. The more chronic skin diseases must be treated according to the rules laid down for such disorders: we may remark, however, that they will be chiefly benefited by those means which tend to improve the general health.

(12.) The typhoid form of this disease will require more general support, and ammonia, with the infusion of serpentary, quinine, or ammonia and decoction of bark. Drs. Loeck and West speak highly of a mixture of æther and hydrochloric acid (*Steiglitz's mixture*), but of this the author has had no experience. Wine, beef-tea, arrow-root, animal jellies, will also be required. If the patient gets no sleep, a few grains of Dover's powder may be given at bedtime with great advantage. Care should be taken that the bladder is not allowed to become distended; if there is retention or involuntary

discharge of urine, the catheter should be passed. If bed-sores occur, the liquor plumbi diacetatis may be applied, by means of a camel's hair brush, every morning, and the part dressed with simple cerate, or a weak solution of nitrate of silver (gr. ij to ʒj), or sulphate of zinc (gr. iv to ʒj), may be used in a similar manner.

(13.) For the sympathetic cerebral symptoms that are usually present, all that is required is to have the hair cut close or shaven, and apply the cold spirit lotion; for, as Dr. G. Bird says, "the delirium and great irritability are part of the disease," and require no active interference. Cheyne, however, recommended antimonials with calomel in those cases of remittent fever where the sensorial functions are much attacked, as also in the commencement of febrile attacks of a less definite nature, which are liable to degenerate into hydrocephalus, and considered that, if more frequently used, the termination in hydrocephalus would be less frequent.

(14.) If symptoms denoting more than functional disturbance of the brain arise,—for instance, pain in the head, constant vomiting, and nausea,—it will be advisable to apply a few leeches, either to the temples or the mastoid processes, and give mercurials, as small doses of calomel or hyd. c. cretâ, two or three times a day, or oftener, if the cerebral symptoms are urgent, avoiding all undue irritation of the bowels; for hydrocephalus, supervening on remittent fever, will not bear the more antiphlogistic remedies required when it arises idiopathically; in short, although the head affection requires our attention more than the original disease, inasmuch as it is more fraught with danger, we must always remember that the patient's health has been, in some measure, exhausted by the previous disease. The cold lotion, or a bladder of ice, should also be applied to the head, the room kept dark, cool, and quiet. If a convulsion should occur, the child may be placed in the warm bath, and, at the same time, a douche of cold water applied to the head. Sinapisms to the soles of the feet or calves of the legs may also be had recourse to.

(15.) When the head symptoms are insidious, and loss of blood contra-indicated, a blister on the nape of the neck, or the application of acetum lyttæ, afterwards dressed with the ung. hydrarg. mitius, should be used, with small doses of mercurials, endeavouring to avoid irritation of the bowels. Among counter-irritants, which are very serviceable in proportion as the symptoms are chronic, is the repeated use of the tartar emetic ointment to the scalp, which is sometimes attended with marked benefit.

(16.) When we consider the cerebral symptoms present depend not on any amount of activity or inflammation, but rather on want of power, denoting what has been termed "hydrecephaloid disease," the remedies before mentioned must on no account be had recourse to, as they would aggravate the mischief, but a few drops of spirits of ammon. fœtida may be given three or four times a day; ammonia in solution, or a small quantity of wine, may be required, and the free use of nourishment. In these cases of exhaustion, a grain and a half to two grains of Dover's powder at bedtime, will be found of the greatest service.

(17.) In general, a light diet, as cold water, toast-water, or barley-

water to allay the thirst, thin arrow-root, or milk and water, is all that is required in the simple and acute forms, in the early stage of the disease; afterwards beef-tea, veal, mutton-broth, light animal jellies, isinglass dissolved in milk and water, may be given: in the typhoid form they are required earlier, and in a more nutritious state,—the addition of wine to the jelly, or diluted with water, to the amount of one, two, or more ounces in the day. By degrees, light bread pudding, bread and milk, fish, may be given; but the return to ordinary diet should be postponed for some time, as relapses are sometimes produced by it, or the patient rising too soon from his bed and mixing with the other members of his family.

(18.) As the patient improves, nothing tends so much to restore his general health and strength as a change of air, particularly sea air; and in fact, when the disease has arisen, as it most usually does, from malaria, or general endemic causes, this change should be had recourse to earlier, as it not only affords means for the recovery of health, but also removes the child from the direct source of disease.

REPORTS
ON THE
PROGRESS OF THE MEDICAL SCIENCES,
July—December 1851.

THE intention of the following Reports is to pass in review the principal additions to each department of Medical Science, which have been placed on record during the preceding six months. It is not contemplated that they should be confined exclusively to the notice of what is new; any fact or doctrine which may be considered practically useful, will, although not strictly novel, be regarded as worthy of commemoration. It must be obvious to all who are aware of the immense mass of information which is almost daily put forth by the medical press of this and other countries, that the notice of every subject would be an impossibility. It therefore devolves upon the writers of each Report, to select only such articles for retrospection as may possess superior recommendations, either of an intrinsic character, or in relation to the main end and aim of all medical knowledge—the alleviation of suffering and disease.

I.

REPORT ON THE PROGRESS OF PRACTICAL MEDICINE PATHOLOGY, AND THERAPEUTICS.

Bibliography.

THE contributions to Practical Medicine in the shape of distinct treatises, since the publication of our last volume, have not been numerous. The following only have reached us, and will be noticed in their proper places :

I. *A History of Epidemic Pestilences from the earliest ages, with researches into their Nature, Causes, and Prophylaxis.* By WILLIAM BASCOMB, M.D.

II. *A Practical Treatise on the Management of Diseases of the Heart, &c. With especial reference to the Treatment of those Diseases in India.* By NORMAN CHEVERS, M.D.

III. *A Practical Treatise on the Diseases of the Lungs and Heart, including the Principles of Physical Diagnosis.* By WALTER HAYLE WALSHE, M.D., &c.

IV. *On Diseases of the Mucous Membrane of the Throat.* By W. WAGSTAFF, M.A., M.D.

V. *On Gout, its History and Causes, and its Cure.* By WM. GAIRDNER, M.D. 2d. Edition.

PART I.—GENERAL PATHOLOGY.

§ I.—*Causes of Disease.*

1. The ardour with which investigations into the modes of origin and propagation of disease is undertaken, is a feature of the present age, and almost exclusively of this country. Difficult as the inquiry is, it has already been productive of the most beneficial results, and it gives to what is termed the sanitary movement a degree of importance second to none of human endeavours to ameliorate the human race. How much of disease is to be attributed to neglect of hygienic precautions, and how readily such sources of pestilence can be removed, is only to be comprehended by a reference to the labours undertaken under the superintendence of the Public Health Act ; some documents of which are now before us.

The above remarks are especially verified in a report by MR. LEE,* on the sanitary condition of certain towns and cities in this kingdom, in which we find a large amount of most essential information. The inquiries upon which this report is based are numerous, and have been submitted generally to the

* Summary of Experience on Disease and Comparative Rates of Mortality, by William Lee, Esq., London, 1851.

medical officers connected with the pauper practice of the several localities, and therefore to parties of all others the best qualified to arrive at correct conclusions on the subject

The deductions which Mr. Lee draws from his observations are, that preventible diseases originate, for the most part, in the decomposition of animal and vegetable matter, the fatal effects of which are manifest in country places, and are not confined to places of dense population, as is often erroneously thought. Of all these preventible diseases, typhus, in its various forms, is the most extended in its operations, as well as the most fatal. It is, he believes, quite independent of geographical positions, climate, or any other uncontrollable circumstances. He also deduces that no appreciable effect would be produced on mortality by particular avocations, were the former causes of disease excluded, and that not more than 11 per thousand deaths arise from strictly inevitable causes.

The report also embraces the sanitary question, in its bearing upon orphanage, poor rates, pauperism, and sick societies.

—A Report by Mr. GRAINGER on the sanitary state of portions of the metropolis, and on the beneficial operation of model lodging houses, is likewise replete with instructive facts.

2. *Electrical Variation as a Cause of Disease.*—In a series of papers recently published in the 'Medical Gazette,'* Mr. W. Craig has most ingeniously, if not conclusively, argued the question of the agency of variations in electrical tension as a cause of disease, referring to this many of the instances in which maladies have been supposed to arise from malaria, cold and wet, &c. He commences by admitting fully the assumption, that the electricity evolved during respiration and assimilation, is the source of nervous power, and that to the maintainance of the due balance of this force is due the maintainance of health. He then inquires into the circumstances which are liable to disturb the equilibrium of human electricity, and determines, that one most effective agent is water in the state of vapour; and he thus explains the presumed effects of malaria, and what in common parlance is termed a chill. As a practical demonstration of, at all events, the remarkable coincidence of disease and low electric tension, he cites a communication respecting cholera, made by M. Andral to the Académie des Sciences. These observations appear to us so important, that we give them at length. Stating that he was in possession of a very powerful electrical machine, M. Andral says:—

"I have remarked that since the invasion of cholera I have not been able to produce on any occasion the same effect. Before the invasion of cholera, in ordinary weather, after two or three turns of the wheel, brilliant sparks of five or six centimetres in length were given out. During the months of April and May, the sparks obtained by great trouble have never exceeded two or three centimetres, and their variations accorded very nearly with the variations of cholera. This was already for me a strong presumption that I was on the trace of the important fact that I was endeavouring to find. Nevertheless, I was not yet convinced; because one might attribute the fact to the moisture that was in the air, or to the irregularities of the electric machine. Thus I waited with patience the arrival of fine weather, and heat, to continue my observations with more certainty. At last fine weather came, and, to my astonishment, the machine, frequently consulted, far from showing, as it ought to have done, an augmentation of electricity, has given signs less and less sensible, to such a degree, that during the days of the 4th, 5th, and 6th of

* Medical Gazette, Sept 19, et seq.

June, it was impossible to obtain anything but slight cracklings without sparks. On the 7th of June the machine remained quite dumb. This new decrease of the electric fluid has perfectly accorded with the renewed violence of the cholera, as is only too well known. For my own part, I was not more alarmed than astonished; my conviction was complete. At last on the morning of the 8th, some feeble sparks reappeared, and from that hour the intensity decreased. Towards evening, a storm announced at Paris that the electricity had re-entered its domain; to my eyes, it was the cholera which disappeared with the cause which produced it. The next day I continued my observations; the machine at the least touch rendered with facility some lively sparks." M. Andral goes on to state that, in the six days following the 8th of June, the mortality in Paris fell gradually from 667 to 355.

As illustrative of the individual effects of withdrawal of electricity as a cause of disease, the author cites the familiar instance of getting wet. In this case, he observes, the wet is converted into moisture, which abstracts electrical force from the surface of the body. If the person be young and vigorous, or by having food in his stomach he generates electricity, he may resist the effects of the loss; but if old and infirm, and no generation of electricity is going on but through the respiration, the nervous power is depressed, and disease of some kind or other arises.

At a further part of his interesting essay, the author considers the most approved methods of avoiding this disturbed balance in electrical tension, such as proper clothing, habitations, and food; he also investigates the action of electricity on vegetable life, and more particularly in reference to the origination of the potato disease; after which he recapitulates his views in the following propositions:—

1st. That heat and electricity are identical, as the one can be converted into the other.

2d. That a large volume of electricity surrounds every primary constituent of matter, especially that form of matter which constitutes the gaseous bodies.

3d. That animal heat is supported by the electricity liberated from the primary constituents of matter during the processes of respiration, digestion, and assimilation.

4th. That electricity is evolved during these processes on the same principle as that which is evolved during the action of a galvanic arrangement.

5th. That electricity and nervous power are analogous, if not identical; as the action of the one can be successfully substituted for the other.

6th. That the majority of diseases are caused either by the sudden abstraction or slow abduction of electricity from the body.

7th. That a low state of electrical tension on the surface of the earth, produced either by the action of evaporation or some occult movement in the great internal currents of the earth, is the remote cause of epidemic and pestilential diseases.

8th. That occasional and ordinary diseases are produced by the sudden abstraction, or slow abduction of electricity from the body, or by its undue elimination during the vital processes.

9th. That since electricity is so essential to the integrity of the vital operations, it is indispensable to promote its evolution and to prevent over radiation.

10th. That electricity is the source of vitality in vegetable life, and that by its instrumentality the roots extract nutriment from the soil.

11th. That vegetables of rapid growth require a large supply of electricity; and the potato is of this kind.

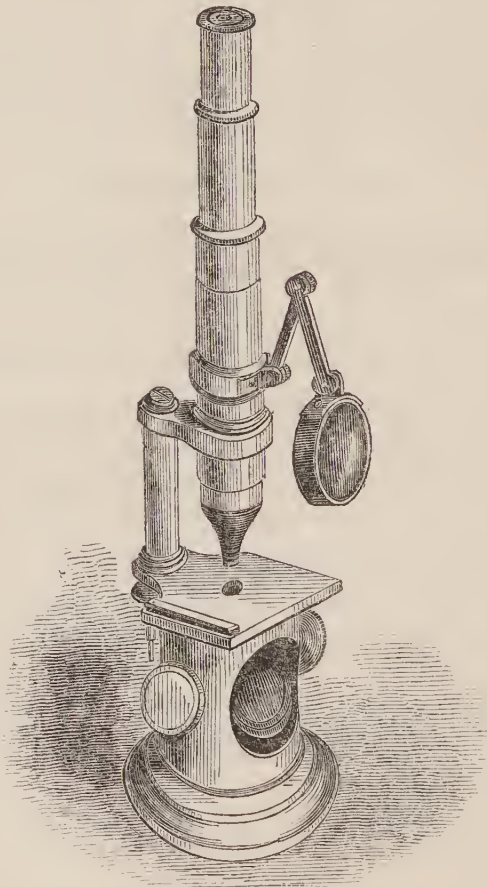
12th. That the potato disease is produced by defective nutrition, which arose from defective electric agency, arising from influences which produced low tension of that force.

§ II.—*Diagnosis of Disease,—the Microscope.*

3. We have to notice two pamphlets devoted to the exhibition of the important aid to be derived from microscopical inquiry in the diagnosis of disease. The first of these is by Dr. LYONS, the other by Dr. HUGHES BENNETT.

—Dr. LYON's publication which he terms 'An Apology for the Microscope,' is an introductory lecture delivered in the Dublin School of Medicine. It gives a good historical sketch of the progress of microscopical research, and points out the various circumstances connected with pathological inquiry in which its aid is all but indispensable.

—Dr. BENNETT's clinical lecture* contains a large amount of practical information respecting the microscope, and its usefulness is further augmented by several woodcuts, some of which we reproduce, illustrating the most serviceable instruments, and the most important microscopic objects connected with practical medicine.



Oberhaeuser's latest model, made at Dr. Bennett's suggestion, for medical men.

On the subject of the instrument itself, Dr. Bennett has the following remarks:—

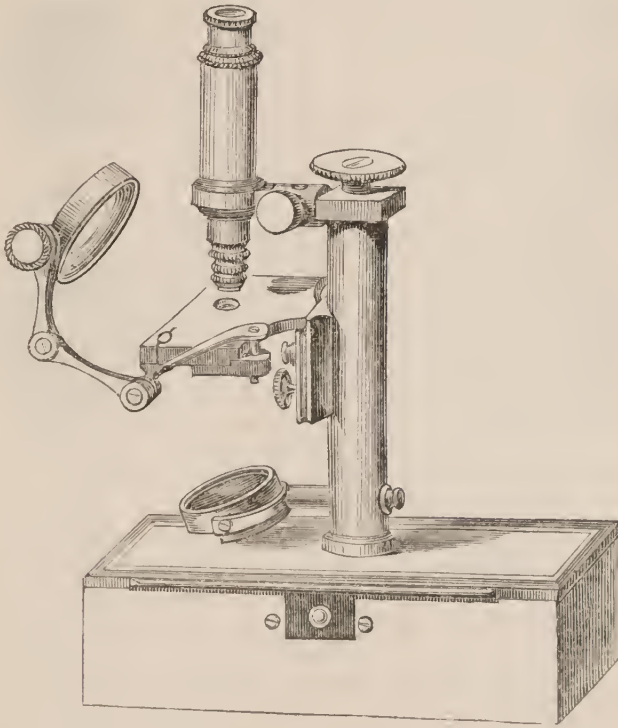
* Lectures on Clinical Medicine, by John Hughes Bennett, M.D., F.R.C.S.E. No. 5.

A microscope may be divided into mechanical and optical parts. One of the best for general use to the physiologist and medical practitioner, is the one of which a cut is given, in the preceding page, one fourth the actual size.

The body consists of a telescope tube eight inches long, held by a split tube three inches in length. The coarse adjustment is managed by the hand giving it a corkscrew movement, the fine adjustment is accomplished by a screw which is placed at the lower end of the pillar by which it is supported. The stage is strong and solid with a circular diaphragm beneath it.

This instrument is said by Dr. Bennett to possess all the requisites of a useful instrument, viz., steadiness, ease of adjustment, and portability.*

Where portability is a special object, Dr. Bennet recommends a pocket microscope invented by Dr. Gruby, of Paris. It is contained in a case the size of an ordinary snuff-box, and possesses all the conveniences of larger instruments, including lenses, micrometer, &c. It is accurately delineated in the accompanying woodcut, as mounted for use.



For pocket use and bed-side examination, a very ingenious instrument has been designed by Dr. W. T. Gairdner. It consists of a Wollaston's doublet, with a focal distance of $\frac{1}{13}$ th of an inch, and magnifying from 150 to 200 diameters. The lens is fixed in a plano-concave metal dish, attached, as is seen in the woodcut, to a handle. On the plane side is a ring of silver, in which a thin piece of glass is fitted, also supported by a steel handle. The two handles are united by a screw, and the focal distance is regulated by another screw, the use of which either separates the two handles or allows them to remain in apposition. A drop of the fluid to be examined is placed

* This instrument may be obtained in Paris for 6*l.*, in Edinburgh for 7*l.* 7*s.*, having two object glasses, (Nos. 3 and 7,) two eye pieces, (Nos. 3 and 4,) and in a neat case with the accessories.

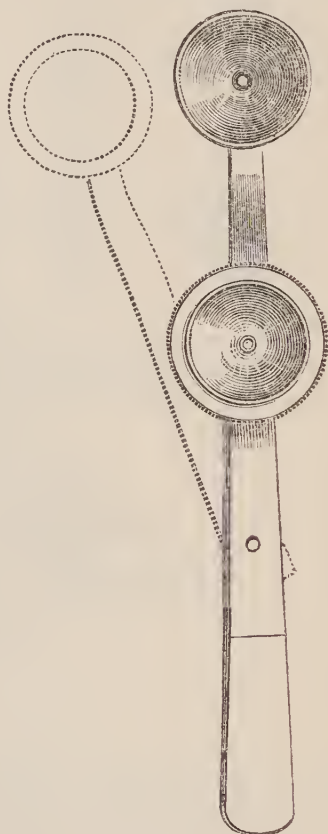
outside the glass, either covered or not by another piece of glass, then the instrument is applied to the eye, and directed towards the light. By this simple instrument we may distinguish blood, pus, and other corpuscles, crystals, &c., sufficient to experienced eyes, for diagnosis. By shading the lens externally with the finger, all the effects of a diaphragm are produced.

[We have been favoured, by the liberality of Mr. Bryson, Princes Street, Edinburgh, the maker, with an improved instrument of this kind, which has lenses of two powers, which can be attached at pleasure, and a few supplementary glasses, the whole comprised in a case which will go into the waistcoat pocket. We have carefully tested this instrument, and are so convinced of its usefulness for speedy diagnosis at the bedside, that we willingly urge upon our readers the advantages of possessing it. The instances in which its assistance may be required, need not be mentioned. The price complete in the case is, we believe, 35s.]

Fig. 1.



Fig. 2.



Gairdner's simple clinical microscope. Fig. 1, a lateral view of the instrument.

Fig. 2, a front view, showing in outline the posterior glass separated and turned aside.

The optical portions of the microscope, as described by Dr. Bennett, are the objective, the eye piece, and the methods of illumination.

1. *The Objectives, or Achromatic Lenses.*—This is the portion at the bottom of the tube and next the object to be examined, and is made of various focal lengths. Of these Dr. Bennett considers the quarter inch as the most useful for anatomical purposes, or which is the same, the No. 7 of

Oberhaeuser. For low powers Oberhaeuser's No. 3, or the one inch lens of the London opticians, is the most generally serviceable. For the higher powers the London opticians are pre-eminent; we may mention the $\frac{1}{8}$ th inch by Smith, the $\frac{1}{12}$ th inch by Ross, and $\frac{1}{16}$ th inch by Powell. The Parisian lenses are cheapest for their several powers.

2. *The Eye Pieces*.—This is the portion placed at the upper part of the tube next the eye. Its use is to magnify the image of the object transmitted by the lens. Two eye pieces are considered necessary by Dr. Bennett, namely the 3 and 4 of Oberhaeuser.

3. *Illumination*.—This is accomplished, first by transmitted light; 2, by reflected light; 3, by achromatic light.

Transmitted light is used for transparent objects, and is furnished by a mirror placed at a certain distance below the stage. The best light according to the author, is that reflected from a white cloud.

Reflected light is used for the examination of opaque objects, and with lenses of low power is obtained unaided, but it is sometimes necessary to condense the rays of light and throw them on the object, which is done by means of a bull's eye lens, fixed in such a manner to the instrument as to be moveable in any direction.

Achromatic light Dr. Bennett states to be only serviceable in examining very delicate objects with higher powers; it is seldom required in medical examinations.

In reference to the mode of making microscopic examinations, Dr. Bennett gives the following plain instructions:—

“All that is necessary in examining fluid substances, is to place a drop in the centre of a slip of glass, and letting a smaller and thinner piece of glass fall gently upon it, so as to exclude air-bubbles, place it upon the stage under the objective. In this way the fluid substance will be diffused equally over a flat surface, and evaporation prevented, which would dim the objective. The illumination must now be carefully arranged, and the focus obtained, first by means of the coarse, and then by means of the fine, adjustment. It will save much time, in examining structures, to employ always, at one sitting, the same slip of glass, as it is easier to clean these with a towel, after dipping them in water, than to be perpetually shifting the coarse adjustment.

“The action of water, acetic acid, and other reagents on the particles contained in the fluid, may be observed by adding them to another drop before covering with the upper glass; or when this is done, a drop of the reagent may be placed at the edge of the upper glass, when it will be diffused through the fluid under examination by imbibition.

“The mode of demonstrating solid substances will vary according as they are soft or hard, cellular or fibrous, &c. &c. The structure of a soft tissue, such as the kidney, skin, cartilage, &c., is determined, by making very minute, thin, and transparent slices of it in various directions, by means of a sharp knife or razor. These sections should be laid upon a slip of glass, then covered over, and slightly pressed flat, by means of an upper one. The addition of a drop of water renders the parts more clear, and facilitates the examination, although it should never be forgotten that most cell-structures are thereby enlarged or altered in shape from endosmosis. Acid and other reagents may be applied in like manner. The double-bladed knife of Valentin will enable you to obtain large, thin, and equable sections of such tissues, and permit you to see the manner in which the various elements they contain are arranged with regard to each other. Harder tissues, such as wood, horn, indurated cuticle, &c., may be examined by small thin sections, made in the same way. Very dense tissues, such as bone, teeth, shell, &c., require to be cut into thin sections, and afterwards ground down to the necessary thinness. Preparations

of this kind are now manufactured on a large scale, and may be obtained at a trifling cost. A cellular parenchymatous structure, such as the liver, may be examined by crushing a minute portion between two glasses. If it be membranous, as the cuticle of plants, epithelial layers, &c., the membrane should be carefully laid flat upon the lower glass, and covered with an upper one. A fibrous structure, such as the areolar, elastic, muscular, and nervous tissues, must be separated by means of needles, and then spread out into a thin layer before examination, with or without water, &c."

The second portion of the Clinical Lecture, from which the preceding remarks have been extracted, is taken up with the principal applications of the microscope to diagnosis; in aid of which accurate descriptions, both verbal and graphic, are given of the various products, fluid and solid, which it is necessary to be acquainted with. The author commences with the—

Saliva.—This will be seen to contain salivary corpuscles, epithelial scales, and molecules or granules. The former are colourless spherical bodies, varying from $\frac{1}{3000}$ th to $\frac{1}{1800}$ th of an inch in diameter, and containing a nucleus and molecules. The former is rendered distinct by acetic acid. The epithelial scales are flattish cells of various sizes, and irregular outline also containing a nucleus.

In disease of the mouth, the saliva undergoes changes. Ulcers induce an increase of molecular matter. Confervoid growths are also to be met with, especially in the sordes of fever. The *muquet* of infants also exhibits confervoid filaments. In canceroid or epithelial cancer of the tongue, the epithelial scales often exhibit a fringe of fibrils.

Milk, when healthy, exhibits a number of globules of various size, up to the $\frac{1}{3000}$ th of an inch, and perfectly spherical, rolling about in a clear fluid. They dissolve in excess of ether; and aggregate in masses when acetic acid is added, the caseous fluid in which they swim being at the same time coagulated. The globules consist of an albuminous envelope enclosing oil or butter.

The richness of milk is determined by the quantity of these globules—but Dr. Bennett notices that a correct appreciation of the quality of milk by the microscope can only be taken by an experienced observer.

The colostrum contains, in addition to the globules, compound granular bodies, which in the human female should disappear on the third or fourth day after parturition. Pus and blood are detected in milk by their distinctive characters.

Blood contains two principal microscopic elements; the coloured blood disc and the colourless corpuscle. The former are biconcave discs, having a tendency to arrange themselves in rolls like rouleaux of coins. They vary in size from $\frac{1}{5000}$ th to $\frac{1}{3000}$ th of an inch, and show either a bright external rim with a dark centre, or the reverse, according to the focal point at which they are viewed. They alter in shape from exosmosis, becoming irregular, notched, and serrated in outline, if the blood be exposed to the air a little time before examination. On the addition of water they become spherical; they dissolve in strong acetic acid.

The colourless corpuscle is spherical, and of $\frac{1}{2000}$ th of an inch in size. Acetic acid renders them transparent; they are not numerous in healthy blood, but become so in certain diseased conditions associated with enlarged spleen, to which Dr. Bennett has given the term "*Leucocythæmia*."

In inspissated highly fibrinised blood, the blood discs are sometimes so crowded as to assume a caudate shape. They also break down in certain hæmorrhages. With these exceptions, Dr. Bennett thinks that microscopic examination of the blood in disease does not assist materially in diagnosis.

The two subjoined cuts show the appearance of healthy blood, and blood with a preponderance of white corpuscles:

Fig. 1.



Fig. 2.

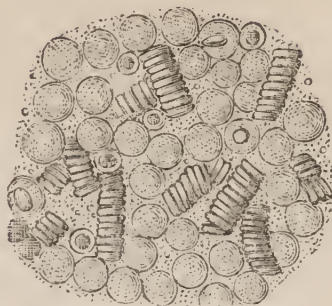


Fig. 1. Appearance of healthy blood.

Fig. 2. Blood in leucoeythæmi.

Pus.—The pus globule is globular, with smooth margin and fine granular surface; the size is $\frac{1}{1300}$ th to $\frac{1}{1000}$ th of an inch. They contain a nucleus which is rendered visible by the addition of water. Strong acetic acid dissolves the cell wall, and liberates the nucleus in one or more divisions, each having a central spot; weak acid renders it visible without destroying the cell. In scrofulous pus and in gangrenous sores, the pus cell is irregular in shape.

Fig. 3.

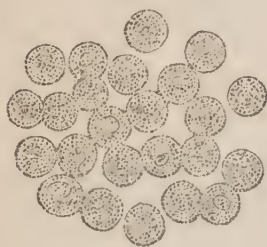


Fig. 4.

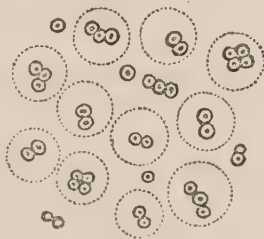


Fig. 5.



Fig. 3. Healthy pus corpuscles. 4. The same after the addition of acetic acid.
5. Corpuscles in scrofulous pus.

Sputum.—The examination of the sputum requires extensive acquaintance with microscopic objects. Dr. Bennett has found contained in it, all the tissues which enter into the composition of the lung, as filament, epithelium blood corpuscles, &c., mucus, pus cells, tubercle corpuscles, granules and amorphous matter, pigmentary deposits, and parasitic vegetation, as well as all the varieties of matter derived from food. He does not regard examination of the sputum, therefore, as of much value in diagnosis.

Vomited Matters.—Among the various microscopic objects presented by vomited matters, irrespective of the food and epithelial scales, Dr. Bennett mentions the peculiar bodies discovered in the rice water ejections, of which we have given a woodcut in a former volume; also different varieties of torulæ, especially that described by Goodsir under the name of *sarcina ventriculi*, and of which mention is made in the present volume, Art. 23.

These bodies consist, as is seen in the accompanying illustration, of square bundles, whence their name.

Fig. 6.



Sarcina ventriculi.

Uterine and Vaginal Discharges.—Dr. Bennett entertains a hope that many useful results may follow a more extended examination of the products. The menstrual discharge contains blood globules, and young and old epithelial scales. Leucorrhœal discharges always consist of epithelial cells, more or less loaded with fat and pus globules. The gelatinous discharge from the glandulæ Nabothii contains round or oval epithelial cells, which, on the addition of acetic acid, are seen to contain nuclei. The various morbid growths have their special characteristics.

Dropsical Fluids sometimes present peculiarities thus,—Spermatozoa are sometimes found in the fluid of hydrocele. In ascites, the fluid contains a few epithelium cells and blood globules. In ovarian dropsy, various products are found, as pus and blood corpuscles, epithelial cells, colloid or cancer cells, fatty granules, and flat plates of cholesterine.

The Urine.—To examine the deposits found in urine, the supernatant fluid should be poured off, and some of the deposit placed in the field of the microscope. The principal salts to be seen, are—

1. *Uric Acid.*—These crystals are coloured, varying from light fawn to deep orange red. Their forms are various, but most commonly rhomboidal; other forms are lozenge-shaped and square, or flat scales with longitudinal marks.

2. *Urate of Ammonia* usually appears in amorphous masses of molecular and granular particles; it also assumes the stellate form.

3. *The Triple Phosphate* is the most commonly crystalline form met with in the urine. The crystals are triangular, sometimes truncated prisms.

4. *Oxalate of Lime* is met with either as octohedral crystals, or more rarely in the shape of dumbbells.

5. *Cystine* presents flat hexagonal plates, with their surface marked, as if by contact of other similarly shaped crystals. Sometimes the centre is opaque.

In addition to these various salts, the urine presents other important microscopic objects, or different organic products, as blood and pus corpuscles, vegetable fungi, casts of tubes, and epithelial scales. In certain instances the tubular casts are seen to hold oil globules entangled. Until lately all these casts were confounded together, but now they are known to consist of two distinct varieties:—1. Fibrinous or exudation casts (1), commonly found in the urine at critical periods of acute inflammation, especially scarlatina, pneumonia, &c. 2. Casts with oil globules, indicative of Bright's disease (2). These are represented in the accompanying woodcuts:

Fig. 1.



Fig. 2.



Fig. 1. Exudation cast of uriniferous tube.

2. Cast of a uriniferous tube with oil globules.

Dr. Bennett warns the reader, that various appearances noticed, are only diagnostic when accompanied by concomitant symptoms; alone they are not to be depended upon.

THE SKIN.—Dr. Bennett considers that much assistance in the diagnosis of affections of the integument is to be derived from microscopic examination. Thus, healthy granulating sores present normal pus globules and fibre cells; in scrofulous and unhealthy sores, as was above stated, the cell formations are irregular and misshapen. Dr. Bennett examines—1. Cutaneous eruptions. 2. Epithelial growths.

1st. *Cutaneous Eruptions.*—In vesicular and pustular diseases, pus formation may be observed in all its stages, commencing as exudation of liquor sanguinis, deposition of molecular matter, and the formation around them of cell-walls. All this may be seen in the eruption formed by tartar emetic.

2d. *Epithelial Growths.*—According to the author, these growths on the skin may assume three forms:—1. That of Squamous Eruption. 2. That of Tumour. 3. That of Ulcer.

1. *The Squamous Eruptions* are three; psoriasis, pityriasis, and ichthyosi. The incrustations of these consist essentially of aggregated dry epithelial scales.

2. *The Epidermic Tumour* appears in the form of condylomata, corns, &c.

3. *The Epithelial Ulcer* is common on the under lip, and on the scrotum in chimney sweeps. The softened matter exhibits epithelial cells, fibro-plastic cells, some round, others caudate and flattened. These ulcers differ essentially from those of true cancer, for which they are often mistaken.

We have thus taken notice of recent contributions to histological science, because we believe that practical acquaintance with the subject is not as much cultivated as it ought to be.

§ III.—Zymotic Diseases.

4. *Epidemic Pestilences.*—The history of epidemic pestilences, from that which occurred in the reign of Pharaoh (1495 B.C.), to the latest invasion of the cholera, has been compiled by Dr. BASCOME,* together with some remarks on the causes of pestilences, and their prevention, and on contagion. The first portion of the work is chiefly valuable as an archæological record, in which sense it may be said to contain much interesting information; but as a record of medical facts, connected with the various outbreaks, it is especially meager. In his chapters on the Causes of Pestilence, contagion is entirely ignored, but not, that we can observe, on sound logical grounds; indeed, the author's chief argument appears to be founded on the assumption, that if pestilence were propagated by contagion, we should have been told so in the Bible, whereas, he observes, "in our most ancient medical treatise, no mention whatever is made of epidemic diseases being reckoned contagious, although, at the time the Levitical code was propounded, there was no lack of experience in epidemic diseases." The prophylaxis advised by the author, consists of the well-known conservative agents, light, air, water, drainage, and personal cleanness.

5. *Fevers, Diagnosis of.*—This question forms the subject of an able article in our talented contemporary, the 'British and Foreign Medico-Chirurgical Review,'† founded on the review of upwards of twenty communications, among the chief of which are those by Dr. Jenner, Dr. Cormack, and others, previously noticed by us. The reviewer commences by inquiring, whether there is any

* A History of Epidemic Pestilences from the Earliest Ages, &c., by Edward Bascome, M.D., London, Churchill, 1851.

† July 1851.

disease, heretofore included under the term continued fever, which should be regarded as a separate affection? In treating this question, he brings before us the account of a disease which is described by Drs. Cormack and Wardell, as appearing in Edinburgh in 1843, and which was so different in its course, symptoms, and rates of mortality, as at once to be declared to be a new disease. It was also seen in Glasgow; and in 1847 became epidemic in London, where it found an historian in Dr. Jenner. Of this fever the great characteristic was its tendency to relapse, whence its name *Relapsing Fever*. Of this disease the reviewer gives a brief, but accurate description, and finally concludes, by admitting the justice of those writers who have separated it from the group of *continued* fevers.

The next question entered upon by the reviewer, may be shortly stated to be,—are *typhus* and *typhoid* identical or distinct fevers? This is the question which has long agitated the meetings of the French Academies; but as we have so fully entered into the subject in our former reports, we do not intend to enlarge upon it on the present occasion, but shall merely record the reviewer's conviction, that the case of non-identity of these fevers, though not absolutely proved, is yet more probable than their identity; and that an universality only of the appearances adduced is required to remove all doubt on the subject.

The concluding portion of the review is occupied with an analysis of the writings of the Germans on the same subject, from which the reviewer deduces still stronger reasons for regarding the relapsing, the typhus, and typhoid, as three distinct diseases; and he is prepared also to find, that a fourth febricula has also with them been erroneously mixed up under the one denomination of *continued fever*.

6. *Continued Fever, large doses of Quinine in.*—Dr. R. DUNDAS,* in direct opposition to all who believe in the correctness of the opinion advanced in the last article, considers the remittent and intermittent fevers of the tropics to be identical with the typhus of this country, and with this conviction has been induced to treat the latter by the large doses of quinine which have been found so efficacious in the former. (See 'Abstract,' vol.V, p. 186.) The doses he gives are ten or twelve grains, repeated at intervals not exceeding two hours. Three or four of these doses will, he says, in general be sufficient to exert the specific influence of the medicine, which is displayed by dizziness of the head and tinnitus aurium, or in the rapid subsidence of all the urgent symptoms. In the latter event, he observes, three grains of quinine, or some vegetable bitter infusion, should be administered three times a day, and the patient supported with good beef-tea or other light nutriment, and wine, if necessary. Should the urgent symptoms return, the large and repeated doses of quinine must be again resorted to. Slops should be avoided, and purgatives also, unless obviously indicated; but an emetic of tartarised antimony, when the *primæ viæ* are loaded, will often prove useful at the commencement, and seems to render the system more obedient to the specific influence of the remedy. Should the urgent symptoms persist, notwithstanding the administration of four or five doses of quinine, or should dizziness of the head and tinnitus aurium supervene, Dr. Dundas advises the medicine to be discontinued; and, after an interval of six or seven hours, small and repeated doses of tartarised antimony should be resorted to, until full vomiting is induced. The patient should then be allowed to rest for twenty-four hours, when the quinine should be recommenced as before. If the symptoms still resist, the remedies may be repeated in succession, as above stated, for a period of four

* Medical Times, Oct. 4, 1851.

or five days; and, unless the beneficial effects are broadly marked within that time, we can no longer reasonably hope for success, from this treatment, and it must be abandoned. Still the author states boldly that in the great majority of cases of uncomplicated typhus, taken at the commencement, complete and rapid success may be calculated on; and, in all, the diseased chain of actions will almost invariably be broken—no unimportant advantage in the treatment of any malady. In the advanced periods of the disease the results will be much less certain; but, in all stages, the large doses of quinine may be safely resorted to, and will commonly calm the patient, cool his skin, allay the headache, and reduce the frequency, and improve the character of the pulse. It must, however, he says, be borne in mind, that any vital organ being seriously involved will prove a disturbing cause to the curative powers of the remedy, which are clearly exerted on the nervous system, through which the blood and secretions are favorably modified, and often with marvellous rapidity.

In support of the statements made, including the detail of several cases, Dr. Dundas adduces the evidence of Mr. Eddomes, house-surgeon to the Liverpool Fever Hospital, who informs him that he has found this treatment to “cut” the fever short, or at least to prevent the accession or increase of the more formidable symptoms.

7. Intermittent Fever.—Some very valuable observations on the connection of ague and enlargement of the spleen have been made by Dr. SMITH, assistant-surgeon in the Madras Medical Service.* According to Piorry, as our readers are aware, an enlarged spleen is the actual anatomical cause of intermittent, and that the paroxysms diminish in proportion as the volume of the spleen diminishes under the use of quinine. The observations of Dr. Smith, as his reviewer remarks, entirely negative Piorry’s opinion. In 4000 cases which came under his care in ten months, particular attention was directed to the condition of the spleen, and with the following results. In 100 cases examined within three months of the commencement of the epidemic, the spleen exceeded its natural dimensions by four inches in length only twelve times, and in 700 other cases there was no complaint of the splenic region. Neither is the enlargement invariable after many attacks. In 11 primary cases no enlargement at all was perceptible; in 19 cases of a second attack it only occurred once; in 25 of a third attack, three times; and in 45 others, in which more than three attacks had occurred, he only witnessed it eight times. As regards the powers of quinine to reduce the bulk of the spleen, Dr. Smith equally overturns the assumptions of M. Piorry.

—Mr. W. KERR† has contributed a paper to point out the utility of the persesquintrate of iron in the treatment of ague. His treatment is thus described. If the patient has paroxysms of ague, ten grains of sulphate of quinine is to be given in divided doses before the expected paroxysm, combined with a teaspoonful of persesquintrate of iron. This, he states, will probably prevent the paroxysm. The succeeding treatment consists in giving the iron uncombined. Several cases are reported in illustration of the effects of this treatment, but the author appears to us to have overrated the powers of the iron, and attributed too little to the quinine given in combination with it.

* On Enlargement of the Spleen, observed during an Epidemic of Intermittent Fever, in the 18th Regiment of the Madras Native Infantry. Reviewed in ‘Edin. Monthly Journal,’ Oct. 1851.

† Edinburgh Monthly Journal, Oct. 1851.

8. *Scarlatina*.—We again call attention, with great confidence in their value, to a course of lectures on this disease, now publishing in the ‘Philadelphia Medical Examiner,’ by Dr. CASPAR MORRIS. We know of no work in which a more practical exposition of its different phases is to be found.

9. *Treatment by Inunction*.—This at first sight extraordinary system first introduced by Schneeman, (Abstract, vol. XII, p. 13,) has been tested, and apparently with good results, by EBERS of Berlin.* The number of cases were in all 22, 11 of which presented one or more of the severe complications, of whom 6 died. Of the total number, inunction was tried in 13, and the usual remedies in 9. Of the latter, 5 died; of the former, only 1 was fatal, and this was beyond hope when the treatment was commenced. The remainder recovered. The conclusions arrived at by Dr. Ebers are as follows:

The inunction with lard did not in any way interfere with the development of the exanthem, as might, *à priori*, have been expected. The eruption came out on the third day, and declined on the fourth or fifth.

This treatment was not contraindicated by the presence of complications; on the contrary, these disappeared more favorably than under the ordinary treatment.

The chief thing noticed was the absence of desquamation. In no case was anasarca known to follow. This treatment appeared also to destroy the contagious principle.

—Dr. MORRIS does not speak favorably of this treatment, but he does not appear to have either tried it himself or known of its adoption in America.

—In the cerebral complications of scarlatina Dr. BENNETT† notices the beneficial influence of colchicum. In one case of great severity he exhibited this medicine under the impression that the delirium and coma were due to nonelimination of urea. Its effect, in combination with diuretics, was to increase the quantity of urates in the urine; in connection with which appearance there was rapid and marked diminution of the alarming cerebral symptoms. He thinks it worthy of more extended trial.

10. *Belladonna as a Prophylactic*.—Although repeated communications have from time to time been made touching the prophylactic properties of belladonna in scarlatina, the opinion of the profession is much divided on the subject; it is even difficult to obtain for it a dispassionate consideration under the impression that the idea has been introduced among many other of the absurdities of the homœopathic sect, and therefore deserving only of contempt. It is, however, an error to suppose that the treatment of scarlatina by Belladonna originated with the arch-impostor Hahnemann, though he was not slow to appropriate it to his own ends. The most recent information on the subject is from the pen of Mr. BENJAMIN BELL,‡ who mentions the internal use of belladonna in the course of a narrative of an epidemic of scarlatina which appeared in Edinburgh. He says that, “conceiving that no means for arresting the disease should be omitted, and that a favorable opportunity offered for testing the alleged prophylactic virtues of belladonna, he determined to give it a fair trial; accordingly, after the occurrence of the second case in the hospital to which he is attached, in which a number of boys are educated, he gave to each the fifth of a grain night and morning. This caused dilated pupil, and the dose was, therefore, diminished, and given uninterruptedly for a month, during which time no case had occurred. There

* *Révue Médico-Chirurgicale*, Août 1851.

† *Edinburgh Monthly Journal*, Aug. 1851.

‡ *Ibid.*

was, therefore, a sufficient time for it to manifest its prophylactic power, if any were possessed, but the subsequent occurrence of several cases served to render this property doubtful."

11. *Smallpox*.—A very elaborate essay on the 'Affinities and Prophylaxis of Smallpox,' has recently been read before the Medical Society of London by Mr. DENDY, and is briefly reported in several of the weekly medical journals.* The author introduced the subject by pointing out the connection between a knowledge of the nature and affinities of the disease and its prophylaxis, as if it were proved that the several varieties of pock were identical, it would be easy to substitute a mild form for the severe one. Supposing, however, that the identity of these varieties be admitted, it becomes an interesting question to determine why one form of vaccine has protective power, but no epidemic influence, and varicella possesses epidemic influence, but no protective power? The author, however, does not admit varicella into the class of variolous affections as it is not inoculable, according to Bartlett, and does not prevail with smallpox, or exclude it. On the other hand, it may be stated that Bateman and many of the present day admit their identity. Varioloid is, in Mr. Dendy's opinion, essentially the same as variola. His classification is as follows:—

Variola—Smallpox.

Variola papularis—Hornpock.

Inoculated variola—In a previously vaccinated person.

Variella—Casual variola in a previously vaccinated person.

Vaccina—Cowpock.

Vaccina spuria—The pustule of grease or udder sores, or heterogeneous or foul matter, often attended by bullæ, rupia, or erysipelas.

Vaccinella—Imperfect, or abortive vaccine.

Varicella	{	Lenticular, chiefly in children.
		Conoid, swinepock.
		Globosa—hives—the closest affinity to variola in form, as it has a partial disc; but none of these produce full variola by inoculation.

To be capable of transmission and prophylaxis, the pock, observes Mr. Dendy, must be circular, umbilicated, and cellular, having a hard base, and containing lymph. If such be not the case, even during the crusting of the false vaccine, not only variola but variella may impart the modified form of the eruption. Mr. Dendy next examined the degree of affinity between variola and the disease which he calls variella, the nature of grease, and the various udder sores, and then proceeded to examine the question as to the controlling influence of vaccina over variola. Of this, he asserted, there could be no doubt; but he considered the statement made by Jenner and Aicken, that vaccination was a *perfect* preservative from smallpox, was the foundation of the prejudices against it. It is indisputable, however, he observed, that the mortality from smallpox, amounting formerly in the British isles, to 40,000 annually—one tenth of the total obituary,—has been so greatly abated in consequence of vaccination and the diminution of variolous foci, that it is possible that the disease may be ultimately annihilated. Variella may, perhaps, occur in 5 cases out of 100, giving a prophylaxis of 95 per cent.; the disease also, when it occurs, being much milder than inoculated smallpox without vaccination. The mortality of this modified disorder, as recorded by Thompson, was about 3 in 71, by Dr. Gregory's Report about 6 or 7 per cent.; while of 1300 unprotected persons, 500 died of variola. Mr. Dendy

* Medical Times, and Lancet, Oct. 25.

next alluded to cases which were totally unsusceptible of the vaccine virus, which he contrasted with those which manifested extreme susceptibility. He remarked that it is essential that the vaccine bud or germ have a congenial soil, uncontaminated by another poison, which, like a weed, might choke its healthy growth. Even during the prevalence of specific malaria, children—though the disease be not actually developed—are rendered especially insusceptible of vaccination. In asthenic, strumous, or cachectic systems the vesicle will be blighted early, or it will burst out into excess or depravity of action, somewhat like the double or monster blossom. It becomes a disease more resembling grease or udder-sores, and its prophylaxis, of course, fails. Hence the advantage of a preparation of the system; for it is in these depraved diatheses that variola so often becomes confluent, malignant, and bloody, or terminates fatally, even before the eruption would have appeared. The natural predisposition to infection is effected by a change in the crasis of the fluids. According to the acuteness or intensity of the agents that effect this in the system, will be also the degree or extent of elaboration from the system. In the mild form of vaccine, this depuration is effected by the mere efflorescence of an areolated vesicle, the visible sign of the constitutional influence. In the severer variola, the process of elimination is multiform—diarrhœa, hæmaturia, cellular œdema and effusion, and induration and suppuration of glands, the more malignant form being attended by the bullæ of pemphigus, terminating in ragged ulcers, or deep abscess under the crust. Modified variola or variella is not a mule, as it is reproductive, and may be communicated like perfect variola, both by malaria and by inoculation. It may also induce the specific fever without eruption, in children and in nurses, who are protected in a higher degree. Its inoculation for the fourth or fifth time, the author believed, would produce full variola, marked by true variolous symptoms, and he thought it might do so at once. In several isolated cases, in which some years ago he practised its inoculation, there were both the secondary and tertiary fevers, the first a slight erethism on the third or fourth day prior to the general eruption, and the other on the maturation of the pustule. When occurring casually, the first eruption of variella is on the hands, of variola usually on the face and breast. An argument against the identity of variola and vaccinia will be found in their running a parallel course, or in the one overcoming the other, variola being generally the victor when inoculated simultaneously. This draws attention to the question of incubation or latency of a germ. The poisonous atom will sometimes lie in the system for months and years. Rabies has occurred fourteen months after infection; syphilis may produce secondary or tertiary symptoms years after primary disease has subsided. The incubation of variola may be, therefore, somewhat undefined; nevertheless, from experiments, a fair conclusion, may, the author thinks, be formed as to the usual period of this incubation, when vaccine prophylaxis may be induced; and from these he judged, that, if on the third day, before the onset of erethism, rigor, and headache, perfect lymph be inserted, prophylaxis is almost certain, assuming three or four days for the premonitory symptoms before the variolous point or papula appears. The vaccine vesicle will then be eight or nine days old, the areola will be becoming indurated, and erethism will exist. It is probable, Mr. Dendy added, that, in this fever against fever, the essence of prophylaxis really exists. If under this influence the variolous papula proceeds, it will resemble umbilicated varicella or hornpock. If the vaccine be used two days later, especially if there be bronchial or pulmonary symptoms present, it will be useless. The papula may be just apparent, but it will be blighted. There are, of course, exceptions to this rule.

In reference to protection, Mr. Dendy believes, that quality is better than quantity; that one perfect vesicle is preferable to a crop of pale, undefined vesicles. If, therefore, there be two or three perfect vesicles, with annular and indurated areolæ, combined with erethism of two or three days' duration, and followed by spotted or pitted cicatrices, corresponding with the cells of the vesicles, the impregnation and prophylaxis are as complete as from variola against the influence of malaria. Spurious variola, varicella, and variolous hornpock may still occur by inoculation. The occurrence of variella from exposure to variolous malaria, in vaccinated children cannot be above 4 per cent. The inoculated smallpox has seldom been, Mr. Dendy believes, followed by a secondary disorder. The cases of secondary variola are marked by extreme severity, especially in adults; the fever will be acute or typhoid, and precede the eruption of variella. The cases of three children were given, one, the youngest, unvaccinated, caught smallpox and died; the second child, well vaccinated two years previously, escaped altogether; and the eldest, who was deeply pitted with smallpox, had a severe secondary attack, and also died. These children all slept in the same bed. The nurse, vaccinated in infancy, had a severe, but soon subsiding attack of variella. Other similar cases were adduced from other authors. From all this, we learn that prophylaxis is not a rule without exceptions, either in its direct or subsequent influence. With respect to the question of limitation of influence, by some it has been referred to an abstract law of time. Copland affirms that vaccination is more prophylactic than variolation for fourteen years; and Dr. Gregory has referred to the extreme rarity of variella or modified variola, until fifteen years after vaccination was generally adopted. Mr. Dendy believes that the first opinion may be extended throughout the life. He is of opinion that there is no law of limitation. That some occult change has been effected, either in the vascular, nervous, or glandular system is certain, whether we adopt the chemical, animal, or fungoid pathology. A sporule of a fungus may be sown or planted in the cutaneous tissue, as a vegetable seed in the earth, or rather as a bud is grafted beneath the bark. The cotyledon may thus be unfolded, and the developed germ is thrown up to the surface of the soil, terrestrial or cutaneous, and is there displayed, either as a flower or as a pock, in all its characteristic forms and colours. If the germ be diseased, or if the soil be uncongenial or infertile, an imperfect efflorescence will ensue, a blighted or a bloated flower will be displayed. The soil may be naturally infertile, or it may be impoverished by over-stimulation, as in the area within the circle of the ring-worm, or of those vegetable eccentricities termed "the fairy ring;" both being the result of fungoid sporule spreading in a circle. To complete the analogy, the virus has poisoned the blood, and thrown out its flower on the surface. It has thus done its duty, and the system is thus both protected and depurated. The existence of the sporules was sought to be ascertained in crusts obtained from Mr. Marson, of the Smallpox Hospital. Mr. Dendy, in conjunction with Mr. Grove, of Wandsworth, dissolved them in liquor potassæ, after which black points, which were considered to be the sporules, could be distinctly seen. The notion of a law of limitation is, he thinks, not conclusive. Some concurrent or casual causes may still be the explanation of secondary diseases. A want of balance between the antagonising influences certainly exists; a concentrated, intense, or virulent form of epidemic may overwhelm or saturate a system that would have resisted successfully a milder influence; or a system reduced by disorder, or any other depressing cause, would yield to an attack of disease, which, in a healthy state, might have passed by unheeded. The proof of successful vaccination is not hypothetical; it is displayed in the perfect vesicle and the constitutional

excitement. If these requisites be fulfilled, the author believes we shall have little need to re-vaccinate, or to discuss further the vague question of limitation.

12. *Sweating Sickness*.—A fatal epidemic resembling, and supposed by some to be identical with, the sweating sickness of the middle ages, appeared in several parts of France towards the close of the year 1849, and gave rise to such serious apprehensions that a commission was appointed to investigate and report upon it. The reports of the commission, six in number, have recently been laid before the Academiè de Médecine, and are ably analysed by M. Guerin.*

The main symptoms of the malady are headache and general lassitude; profuse sweating, rapid pulse, and painful oppression in the præcordial region. The tongue was moist, but the patients were tormented with thirst. Another very general phenomenon was an eruption of minute vesicles the size of millet-seed. The access of the disease was, in many cases, most sudden, but it was generally introduced by the occurrence of shivering for a day or two. The duration of the disease varied from four to ten days, accordingly as the eruption was present or absent. Like cholera, the greatest mortality was seen in the first few days of the outbreak, it then lost its intensity, and disappeared in less than a week.

No line of treatment appeared materially to influence the course of the disease.

13. "*Grease*," its Communicability to Man.—A case has lately occurred in Guy's Hospital which renders it probable that the disease in the heels to which horses are subject, called the "Grease," is communicable to man, and produces symptoms analogous to glanders, but of a much less fatal character.

The patient, who was under the care of Mr. Cock, was an ostler, in excellent health, until he touched his nose with matter, while dressing a greasy heel. In the evening he experienced some heat on the part, which he attributed to catarrh, but next morning the cheek and nose were observed to be considerably swollen, and a thick discharge flowed from the nostrils.

On admission, the nose was swollen and of a dusky red colour; the cheeks tumid and blotched, and on each side was a hard, painful swelling, like a periosteal node. He was ordered quinine, nitrate of silver lotion (5ss to Oj) applied to the mucous membrane of the nostrils, full diet, ten ounces of port, and two pints of porter daily. Next day the cervical glands were enlarged; the nose was freely punctured, with great relief. Ten grains of Dover's powder at night.

On the third day the patient had passed another restless night; he complained of dizziness and pain in the head; the nose and face were intensely painful, and the tumefaction so much extended and increased, that the eyelids were now completely closed. Two hard lumps of pus came away from the nostrils. Mr. Cock again punctured the nose, and ordered a bread-and-water poultice to be applied to it. The bowels have been well relieved. The quinine was continued, but the powder omitted.

On the fourth day a great change for the better had taken place; the patient passed a good night, slept well, and was comparatively free from pain; the tumefaction about the nose, face, and eyelids is much reduced in size, and the pain much less severe. The discharge continues from the nostrils.

From this time the man continued to improve, and seven days after admission the nose had regained its natural size; the discharge was much reduced

* Gazette Médicale, Sept. 13, 1851.

in quantity and consistence, and on the 26th of April he was presented for dismissal cured, having been in the hospital only ten days.

Mr. Cock remarked that this was the third case he could call to mind where the evidences of poisonous inoculation were clearly traced to contact with the greasy heel of a horse. In both the other cases the poison appeared to have been imbibed from wounds or cracks on the men's fingers, and the most severe absorbent inflammation was produced, accompanied by intensely acute constitutional disturbance.

In the one instance the patient recovered after much suffering and tedious illness; in the other he died at the end of several weeks, worn out by successive abscesses, which formed in different parts of his body. There seemed, therefore, no doubt that the greasy heel of the horse was capable of grafting a specific poison upon the human subject.

As in this case the fact of poison seemed to be clearly indicated and proved, and as the inoculation had been recent, Mr. Cock considered it expedient to endeavour to destroy the contaminated surface as speedily as possible, and to excite a healthy suppurative action on the mucous membrane of the nostrils.

The caustic solution was severely and unsparingly applied, and certainly seemed to have the decided effect of "killing the local disease." The aggravation of inflammation and tumefaction which followed the use of the escharotic, and which extended over the nose, cheeks, and eyelids, was doubtless rather to be attributed to the severity of the remedy than to the extension of the original disease. The same local effects have not unfrequently been produced where a strong solution of nitrate of silver has been injected into the urethra for the purpose of cutting short a gonorrhœal discharge.

Mr. Cock made the punctures in this case with a broad-shouldered lancet, and carried them to a considerable depth. The blood flowed from the wounds in streams and jets, showing the congested and distended state of the vessels. The relief was most speedy and effectual.*

§ IV.—*Diseases of the Blood.*

14. *Anæmia*.—In the treatment of anæmia in children, Dr. MAUTHNER has, for some time, been in the habit of employing the extract of bullock's blood. This extract is made by passing blood through a sieve, and evaporating it to a powder in a sand bath of the dried extract, the dose is ten grains.†

—The rarity of the termination of uncomplicated anæmia in death, renders the following cases worthy of record.

The first was that of a male who was admitted into St. George's Hospital under Dr. Page. He had been ill for several months, and had chiefly complained of pain in the loins. He lost flesh rapidly, but there were no ostensible signs of phthisis. His face was remarkably exsanguine, and his lips pale; tongue whitish and anæmic; pulse 120, weak; bowels had been very costive until opened by medicine received in the previous week; he now complained of shortness of breath and palpitations. There was a slight difference on percussion at the two apices; the respiration was deficient at both, but more particularly at the right side, where it was distant and tubular, but there was no bronchophony. The heart's sounds were loud and shrill, but there was no distinct murmur; the urine was neutral, and free from albumen. Good nourishment was allowed him, and afterwards a drachm of steel wine was

* Reported in the *Lancet*, &c.

† *Révue Médico-Chirurgicale*, Juillet 1851.

added to each dose of his cough medicine. He felt himself better, but continued excessively ex-sanguine. On the 4th of February he was attacked by vomiting. It did not appear that he had been subject to it; and, though the vomited matters were dark, they were not grumous, and probably coloured by the medicine he was taking. He had no pain at the epigastrium, nor was there any distinct hardness to be felt; but there was a certain degree of fulness opposite the end of the ensiform cartilage, which after death was found to be due to the peculiar position of the pancreas. There was a distinct bellows-murmur with the systole of the heart, which was not heard so distinctly over the region of either set of valves as about the centre of the cardiac region, and rather inclining towards the apex. The sickness was stayed by a draught containing hydrocyanic acid and soda; but from this time he became daily more low, and soon died comatose. On examination after death, nothing was found to account for death save a bloodless condition of all the tissues.*

15. *Hyperinosis*.—From the time that attention has been directed to the chemical analysis of the blood, it has been hoped, if not positively asserted, that the treatment of disease would derive material assistance from a knowledge of the composition of the blood, in particular classes of disease. To show that a dependence on such rules as animal chemistry would dictate will lead to dangerous errors in practice is the object of a paper by Dr. MERIWETHER.† He illustrates his views in the first place, by a reference to diseases in which there is an excess of fibrine. This excess is, according to Andral, pathognomonic of inflammation, and it is argued from this that the antiphlogistic treatment is called for. But to show how erroneous an adherence to this rule would be, the author takes the case of acute rheumatism, in which there is a great increase of fibrine, and shows from good authority that were bleeding, &c., pushed to the extent it might be supposed to be warranted by the constitution of the blood, serious mischief would be the consequence, and the tendency to anæmia which that disease in itself produces, would be greatly augmented; from this he concludes that a high rate of fibrine is no guide to the treatment of rheumatism.

Erysipelas is quoted as another disease distinguished for the high ratio of fibrine; but it is a disease, nevertheless, which not only is intolerant of exhausting remedies, but in most cases requires an opposite treatment from the first.

The author next shows that the converse holds true, viz.—that diseases characterised by a diminution of fibrine, cannot always be treated as chemical views would indicate. To illustrate this, he takes the case of apoplexy, in which there is deficiency of fibrine, but which frequently requires bleeding. To sum up: he states that the amount of fibrine cannot be taken as a guide to practice; for it does not diminish, but rather relatively increases under bleeding, and moreover is deficient in diseases of a totally opposite nature, as apoplexy, plethora, typhoid, &c.

16. *Gout*.—We have to notice a second and extended edition of Dr. WILLIAM GAIRDNER'S Treatise on Gout.‡ Of the previous edition we gave an analysis in a former volume (vol. X, p. 268), to which we refer. The chief additions in the present volume are contained in chapters 8 and 9, which are devoted to the consideration of the true office of respiration, of the origin of

* Medical Times, May 3.

† Stethoscope, an American Journal, July 1851.

‡ Gout, its History, Causes, and Cure, by William Gairdner, M.D., Second Edition, London, Churchill, 1851.

fibrin and gelatin, and of the office of the red globules. Respiration is shown not to be a mere process of defecation, but of nutrition: the bearing of these views on the subject upon which he writes, the author exhibits in the concluding paragraph of the ninth chapter.

"I have now gone through the whole of this subject of the chemical and physical constitution of the blood, with a view to prove that rest and repletion lead necessarily to accumulation of globules; that aeration is the source of the fibrine; that by exercise the fibrine is carried forward to the tissues; that by exercise, air, and moderation in diet combined, constitutional disease, and particularly gout, may be avoided and cured; that without them, it is vain to hope for more than a respite from suffering for a longer or shorter period; or only even a suspension of the most acute symptoms." (p. 183.)

17. *Chronic Rheumatism*.—A valuable analysis of the results of treatment in chronic rheumatism has been made in 143 cases by Dr. JOHN CARGILL. These cases are compared as nearly as possible together, under the circumstances of age, sex, duration previous to admission, dose and combination of remedy, result, &c. He first takes 43 cases which were treated by colchicum.

Of these, 14 only were cured, and the average duration of treatment was $15\frac{1}{2}$ days; the average duration of the disease prior to admission being 73 days. Twelve were relieved, and the same number were not improved; in 5 no conclusion could be arrived at.

In rather more than half of those cured, that result was effected by the Vinum Seminum Colchici in the dose of from 15 to 30 drops thrice a day, with a little Magnesia and Sp. Etheris Nitrici. In a very few instances 10 grains of Dover's Powder were given a few times at bedtime. In 6 out of 43, the colchicum was given in powder in 4 grain doses thrice a day; in one case in 6 grain doses thrice a day, and in one case in 2 grain doses thrice a day, all combined with Pulvis Cretæ. In all but the last named it produced vomiting, griping, and diarrhœa in two or three days' time, and had to be left off for the Vinum with magnesia. Of this latter combination, the dose before mentioned, viz., ℞xv to xxx with 15 grains of magnesia, and ʒss of Sp. Eth. Nit. was the most effectual, and the best borne. When the Vinum was given by itself it seemed slower in its curative effect, and when given in ʒjss doses or ʒj doses thrice a day, either alone or combined (a measure in a few instances adopted), it invariably had to be left off, from its producing very speedily its usual severe physiological effects, with great depression, and often cramps, the disease remaining at the same time unaffected. I should add, that these results followed even when the above doses were attained to very gradually.

Concomitant treatment.—In 17 out of the 43 cases the warm bath thrice a week was used, and in 14 out of this number manifest relief was obtained. In 10 cases out of 43, Dover's powder was given in from 10 to 15 grains each night, and in 6 of these cases it was followed by beneficial effects. Cupping was occasionally used, and generally with benefit. Bleeding from the arm was scarcely ever practised, and calomel, Epsom salts, blue pill or colocynth, were used as preliminaries, if constipation existed. As to the seat of the disease, it was in the several joints and muscles. In four cases wherein the rheumatism existed along with sciatica as its chief feature, the treatment by colchicum was fruitless.

The 100 cases treated by nitre in large doses gave the following results:—

Of the 100 cases treated by this method, there were 61 cured, being more than six tenths of the whole, and the average duration of the treatment was $13\frac{3}{4}$ days. In addition to the 61 cured, there were 20 who experienced

great relief, but were not entirely cured at the time of dismissal; there were 5 who experienced very slight benefit only, 3 received no benefit, and 3 got worse. In the remaining 8 cases no positive conclusions could be arrived at.

Dose and combination of the remedy.—The usual dose to begin with was $\mathfrak{z}\text{ij}$ thrice a day in barley-water; this was adhered to in many cases throughout, but in a large number it was increased to $\mathfrak{z}\text{j}$, $\mathfrak{z}\text{iss}$, $\mathfrak{z}\text{ij}$, thrice a day, and, in one case, $\mathfrak{z}\text{ij}$ every four hours, was begun with and continued without intermission for 12 days, without the smallest inconvenience to the patient, who was cured in that period. This was a bad case of $2\frac{1}{2}$ years' previous duration. The dose was often begun with and continued at $\mathfrak{z}\text{j}$, and with no disagreeable effect; sometimes $\mathfrak{z}\text{j}$ thrice daily, and sometimes $\mathfrak{z}\text{j}$ every four hours consecutively.

Being desirous of ascertaining whether the duration of the malady might be shortened, or good in other ways obtained by combining the Nitre with Sp. Nit. Antim. Tart. and Tinct. Opii, Dr. Cargill adopted this in a considerable number of cases, and the result has shown that no advantage is derivable from this practice. The dose of Sp. of Nitre was generally from $\mathfrak{M}\text{xv}$ to $\mathfrak{z}\text{ss}$ or more; that of the Vin. Antim. $\mathfrak{M}\text{xv}$, and that of the Tinct. Opii $\mathfrak{M}\text{v}$ to each dose of the Pot. Nit. Sweating and diuresis were equally produced by the Nitre alone as when given in the above combination. Of the three, the Tr. Opii alone appeared useful by frequently assuaging the severe pain.

Disturbing effects.—It is of great importance to remark that this remedy was invariably administered in a large quantity of warm barley-water—not less than $\mathfrak{z}\text{viij}$ to each dose. When given in the above large doses, without a diluent and demulcent like barley-water, it produces intense griping, with pallor of the countenance and cold perspiration, the pulse and heart's action flagging and coming down, and the greatest anxiety being experienced. This is followed by a dry red tongue, with enlarged papillæ and much thirst. This the author had an opportunity of seeing to an intense degree, in one case wherein the nitrate of potash in those doses had been administered several times without any diluent, by the oversight of a nurse; she gave it in $\mathfrak{z}\text{jss}$ of plain water.

The author next mentions what were the *disturbing effects on the system* observed to be produced by large doses of nitrate of potash, in cases *where it had been duly taken* with barley-water, but had not been well borne by the system. Those effects were seldom manifested, the medicine, when properly diluted, seeming to act mildly and efficiently. When it is not tolerated, however, its effects are primarily on the nervous system. They are these:—General debility of the limbs, especially the lower extremities, and the knees, too, particularly complained of. The author has seen this carried to an extent which made the patients believe that they were seized with general paralysis; the whole body seemed to be made of wood, and for some hours it was impossible for them to rise from their seat or to move hand or foot. To this were conjoined general tremblings, and the speech was affected; occasionally the names of things were forgotten or mistaken: there was also giddiness, and a painful rushing sound in the ears. He never in these rare instances saw any distortion of the features, and the symptoms subsided in a few hours by diuretics or copious perspiration. The subjects of these effects will be found generally of the purely *nervous temperament*, especially if associated with feeble power of the constitution. When the sanguine or bilious temperament is combined with the nervous, the remedy is better borne and may be pushed farther; but the bilious lymphatic temperament, with its firm, harsh, muscular development, is the one in which this plan of treatment the

oftenest succeeds and may be used the most fearlessly, as it is the one on which chronic rheumatism, when once established, displays itself with perhaps the greatest relentlessness.

The *concomitant treatment* was simple, and most generally dispensed with altogether (with a view to ascertain more accurately the value of the nitrate of potash itself), except in cases of severe complication, in which the need for additional means, chiefly local, was urgent. It consisted in occasional warm baths and vapour baths. Cupping and leeching were had recourse to in such cases as showed a concentration of the disease in particular joints, as evidenced by swelling, redness, and acute pain not shifting its seat. In dull chronic pains localised, occasional blisters were applied, and often with benefit; and, towards the termination of the cases, a liniment of ammonia and turpentine was frequently useful in restoring the natural suppleness of the parts. When the pains were so great as to prevent sleep, and to harass the patient in an unusual manner, a draught of muriate of morphia, with solution of acetate of ammonia and water, was given at bedtime. The bowels were kept free by means of occasional light cathartics; and the treatment was generally commenced by giving a dose of calomel and colocynth, followed by a draught of infusion of senna with sulphate of magnesia.

The *diet* enjoined was nutritious, being the ordinary diet of the house—viz., meat once a day, milk, rice broth. In such cases as presented symptoms verging on the acute, low diet was prescribed—such as milk, tea, sago, &c. In all old-standing chronic cases generous diet was found the best, accompanied even by ale, porter, wine, or gin.

In the above 100 cases the *duration of the malady previous to admission* was widely different,—so much so, that no analytic average could be struck with a view to results that would not have a tendency rather to conduce to error than to elucidate truth. The author states, in general terms, that the length of time in these cases previous to coming under the above treatment was from seven days to ten years, whilst there were a few who could remember no period of their lives in which they had not been victims, more or less, to the complaint. Two months, five years, six years, six months, one year, were the most common periods cited; and it should be remarked that nearly all the cases were of an unusually severe character, and had been under all manner of practitioners.

Sex.—It is remarkable that, of the whole 143 patients, 17 only were women, the remaining 126 being men. The average age of the women was 35 $\frac{2}{3}$, that of the men 37 $\frac{1}{3}$. From this it appears that, in this part of the country, men are about 8 $\frac{1}{2}$ times more liable to be affected with chronic rheumatism than women, or for 1 woman attacked with chronic rheumatism there will be between 8 or 9 men. This is, in all probability, owing to the greater exposure of men to cold and wet.

The author finds heart affections to be very uncommon associates with chronic rheumatism. In the cases above analysed it was constantly found that such of them as showed heart disease, had been preceded by rheumatic fever, and the heart affection could be traced to that period of acute disease. This is in conformity with the opinion now generally entertained,—viz. that acute rheumatism is very frequently accompanied by endocarditis, and, without very vigorous measures, is apt to be succeeded by permanent disorganisation of the heart.

Of what value is the nitrate of potash in large doses in *acute rheumatism*? The author has had no experience of it himself in *acute rheumatism*, trusting to calomel, opium, Dover's powder, antimony, and, in the worst cases, bleeding; but Dr. Fenwick, of North Shields, informs the author that he has adopted

it to a large extent in private practice in Shields, and has found it to answer in a remarkable manner, thus confirming Dr. Basham's assertions. (Med. Gazette, Nov. 1848.)

The author concludes by recording certain facts and deductions which have manifested themselves in the investigation of the above cases.

In 9 cases out of those wherein no relief or only slight relief was obtained, there were either *purulent collections* somewhere, or the usual *common inflammations* which precede suppuration—such as testitis, obstinate conjunctivitis, erysipelas. Are we entitled to deduce from this the general therapeutic principle, that in chronic rheumatism, when it is in that aggravated form in which we have pus circulating in the blood, the treatment by nitrate of potash is not to be depended on, and must be relinquished for another?

Again, in 81 out of the 100, the cure was almost or altogether effected in 14 days by the nitrate of potash in large doses, and these were cases wherein, though severe, there was no suppuration, nor ordinary inflammation of particular organs. It has been before laid down that nitrate of potash acts primarily on the nervous system. May we not infer, then, that those 81 cases were cases in which the nervous system was alone at fault? And, from the two considerations taken together, may we not look at rheumatism as a disease composed of two varieties,—viz., that in which its assaults are expended on the nervous system alone, and that other more severe one in which pus circulates in the blood? Various observations and reflections have led me to take this view of the subject. Rheumatism is first a nervous and then a blood disease, and it maintains a distinct individuality in both these phases in a manner more singular than other complaints.* In what the author calls its nervous form it is a kind of Harlequin inflammation, and less mischievous than it seems. A little energy will knock it out of the system: if uncontrolled, it undergoes a transmutation, becomes grave, enters the blood, and changes it, and walks into the heart itself, the citadel of life. At present we want a set of careful microscopic experiments on the blood in all the varied conditions of rheumatism. Last year, at the author's request, Mr. Gibb took, for microscopic examination, small portions of the blood of several patients affected with different diseases. In the blood of one who had no trace of inflammatory affection of any kind we found, to our surprise, numbers of pus globules. In a few days there was developed in this patient a severe erysipelas, which finished by becoming phlegmonous. Here, then, inflammatory disease existed in the blood for a certain time without betraying its presence, until at length its increase became such (*vires acquirit eundo*) that nothing but an acute attack upon the skin sufficed for its elimination.

1. In cases wherein *mercury* has been previously extensively taken, and in cases where there is syphilitic malady present in the system, whether mercury has been taken or not, the nitrate of potash is without power. The remedy is the *hydriodate* of potash.

2. In cases of general chronic rheumatism, in which *sciatica* is the most painful feature, the nitrate of potash will banish the complaint from the other parts, but will not avail against the sciatica. In this event, *arsenic*, where it is borne, is the most powerful remedy.

3. In cases wherein the symptoms are doubtful, being circumscribed though severe, and simulating such other common inflammations as pleuritis, peritonitis, ordinary cerebral or spinal meningitis, and even spinal irritation and hysteria, the *state of the tongue*, if it appear as if over-laid with a coat of deep or light white paint, so constant in the rheumatic condition, will most essentially guide the diagnosis.

* Medical Gazette, Oct. 10, 1851.

18. CRETINISM.—M. FERRUS, in virtue of his office of Inspector of the Condition of the Insane in France, has, during his excursions into the Alpine, Pyrenean, and other infected regions, investigated the condition of the Cretins, and has read an interesting memoir on the subject to the Academy of Medicine. As much of what he says is only corroborative of the conclusions of the Sardinian commission, with which our readers have been made acquainted, we shall only advert to some few points.

M. Ferrus observes, that the number of cretins may seem to be more diminished than they really are, as, owing to the alteration of opinion that has taken place respecting them, their friends drive them away, instead of exhibiting them as heretofore,—one good result of this being that the encouragement of sexual intercourse between them and sound persons has ceased to prevail. After a vivid picture of the condition of the cretins he saw at Sion in 1837, he shows that, in many of their characteristics, they differ from idiots; the latter being far from exhibiting the animation and *bizarrerries* he witnessed among the cretins, who, he believes, are more susceptible of education than they are. The peculiarity which especially struck him, was the mode of the development of the cranium, which, in all, had more or less of a hydrocephalic character. Even among the more advanced cretins, some remains of memory exist; and in the demicretins it may be considerable, and is more marked than in idiots.

M. Ferrus quotes, at considerable length, Stahl's account of the pathological anatomy of cretinism, which confirms him in his opinion as to the intimate nature of the disease. "I have sought," he says, "to render prominent two orders of essential phenomena. 1. A constitutional condition of the entire economy, a peculiar temperament, a lymphatic or cretinous cachexia. 2. A moderate but permanent degree of cerebral compression, shown by the obtuse state of the senses and faculties, the general engourdissement of the economy, the unusual size and the continuous vacillation of the head." The author considers the most exact definition of cretinism would be, *a chronic œdematous hydrocephalus, diffused hydrocephalus, or cerebral œdema*,—the considerable effusion into the ventricles and upon the surface of the brain being, in his view, essential features. When the affection is generally developed in a country under the influence of continuous local causes and generative transmission, the disease affects more or less the entire mass of the brain of the cretin, though it may not at once abolish all the functions. Pathological anatomy may much more frequently show in *idiots* local affections of the brain, but the remainder of its substance has not undergone any appreciable change;—so that in them we sometimes observe isolated faculties nearly untouched, while others are absent; and certain portions of the body paralysed or atrophied, while others are active and useful.

In regard to the *causes* of the affection, M. Ferrus is in considerable accordance with the Sardinian commission; but he attributes far greater influence, in the cretin regions of France (Brittany, the French Jura, borders of the Rhine, Lorraine, and the Pyrenees), to the absence of free ventilation by a pure air, than to bad diet, inasmuch as this is quite equal to that of various other parts of the country where cretinism does not prevail. He denies that the views of M. Grange and others, of the ill-effects of magnesian waters and soils, are founded on fact; and asks how, in such case, the disease has become eradicated from these identical soils, by the vigorous adoption of hygienic measures. He does not deny the remedial power of the iodized food that has been recommended, but he doubts its preventive agency.

M. Ferrus considers that the propagation of the affection by sexual intercourse, should be prevented; and that, as regards their sequestration and

responsibility, cretins should be administratively and juridically assimilated with idiots.

In respect to *education*, after referring to the part he had taken in applying this to idiots, and the gratifying results, M. Ferrus stated his belief, that even yet more encouraging ones are to be anticipated with respect to cretins, and that for the following reasons:—(1.) Because the disease affecting them, contrary to what is the case in idiots, depends upon the general disposition of the economy, which can be advantageously modified by change of place, regimen, and habits. (2.) Because the pathological alteration of the brain consists in a general modification of the texture of the organ, or rather in the abnormal quantity of fluid which it contains; and that this modification is much more accessible to art than are the arrests of formation and partial alterations of cerebral substance, which are so frequently met with in idiots. (3.) Because, while in the idiot the faculties are radically extinct, or exist only in a rudimentary state, they would have acquired in the cretin with the integral development of the organ an equally complete activity, had not disease interrupted this. Although now oppressed and obtuse, they are not absolutely obliterated.

Entertaining the above view of the nature of the disease, M. Ferrus, besides hygienic and educational treatment, would resort to means calculated to relieve the diseased cerebral condition, viz., revulsive remedies, whether acting as purgatives or external irritants.

In the discussion which followed the reading of the paper, it was objected to M. Ferrus, that his distinction between cretinism and idiocy, founded upon the pathological appearances hitherto recorded, is based upon very insufficient data. M. Grange's statements concerning the influence of magnesian soils, too, meet with but little favour at the Academy, though he has accompanied their exposition by an elaborate geological map, the correctness of which is testified by M. Elie de Beaumont. M. Niepce, who has been investigating the subject in the cretin regions during the last three years, and has just published a work upon it, states that he has repeatedly analysed the waters of the most infected districts, and has hardly ever found them containing the magnesian salts in question. M. Bouchardat believes that the Sardinian commission examined this part of the question in the most superficial manner, though reporting on it so confidently. He observes also, that although it may be true, as M. Grange has brought so much evidence to prove, that the disease especially prevails in magnesian soils, yet it is not probably owing to so innocent a substance as magnesia itself. He thinks it much more likely that the gypsum, so prevalent in such soils, may prove injurious. In localities where these soils were present, and goitre and cretinism do not prevail, this may be due to the counter-acting presence of iodine.*

PART II.—SPECIAL PATHOLOGY.

§ I.—*Diseases of the Nervous System.*

19. *Cerebral Softening*.—A brochure specially devoted to the consideration of this subject by Dr. RICHARD ROWLAND,† has just issued from the press,

* Bulletin des Academies, translated in 'Brit. and For. Med.-Chir. Rev.,' Oct. 1851.

† On the Nature and Treatment of Softening of the Brain, by Richard Rowland, M.D., &c., London, Highley, 1851.

and may be pronounced to be a very complete exposition of the present state of knowledge respecting its nature and consequences. There is, as the author observes, no disease of the nervous system whose nature and symptoms are less accurately defined. The term itself, "ramollissement," is applied to lesions having different pathological significations. Several varieties of softening are mentioned by the author, but for practical purposes the division into inflammatory and non-inflammatory is sufficient.

The distinctive symptoms of cerebral softening are described by Dr. Rowland with great accuracy, but it will not be necessary to do more than mention those upon which medical opinion is either divided or unconfirmed. A symptom considered by the author to be of great significance is the reiteration of comatose attacks with a rapid or almost abrupt restoration of consciousness; at one hour the patient is in the deep lethargy of apoplexy, the next, perhaps, sitting up in bed and talking rationally. This we have witnessed in a case which recently has been for some months under our observation. In this instance the coma was complete on several occasions, even to the extent of producing that "whiffing" respiration generally considered to be mortal, but the return to reason was always preceded by an hour or two of incoherence. The cause of these seizures is difficult of explanation.

The lesions of speech form a remarkable group of symptoms, and present themselves with various peculiarities. Sometimes, observes Dr. Rowland, there is an entire privation of speech, the patient at the same time being perfectly rational and aware of his defect. It is at other times hesitating and slow, with or without a loss of memory, of words, or an entire misapplication of them.

Another symptom of great interest is tonic contraction of the limbs. Dr. Rowland speaks of this as if it were a general symptom, and indeed it is considered by Andral and others as one of the least equivocal signs of softening. This would, however, appear to be an error.

Of the causes of cerebral softening Dr. Rowland speaks with some hesitation. Hereditary influence is not to be traced, and a like uncertainty holds with regard to temperament. In reference to sex, Dr. Rowland's inquiries elicit the fact that, contrary to the received opinion, the female is much more liable to it than the male. In Andral's cases, 116 in number, 69 were females; and in 100 cases taken from promiscuous sources the author found 58 females to 42 males. It has generally been supposed that great mental exertion, or long-continued anxiety of mind, is a fertile source of cerebral softening; this the author refuses to acknowledge; he finds, indeed, that of 152 literary men, whose age at death was known, the average was as high as 69. Frandini found that 18 out of 104 celebrated mathematicians reached the advanced age of 80, and two lived to 90. Moral causes are of greater power in inducing disease than simple intellectual exertion.

A very important question in connection with cerebral softening is the connection of heart disease with it. Dr. Rowland enters minutely into this question, but adduces no new facts in its elucidation. He is disposed to agree with Drs. Watson and Copland, that the heart disease, when coexistent with cerebral softening, should be regarded rather as typical of a general alteration of the vascular system. This view has been strengthened by Mr. Paget's discoveries of fatty disease in the arteries of the brain, of which we have taken notice in a former volume. (Vol. XI, p. 210.)

The nature and pathology of cerebral softening is next reviewed by the author, and, as he remarks, "with no little hesitation, for it is full of difficult questions, on which the most accomplished pathologists still hold opposite

opinions." In reference to the nature of this lesion, too much stress has, in the author's opinion, been laid upon colour. Redness has been looked upon as evidence of its inflammatory origin, without reflection that this appearance may depend upon simple congestion, or even imbibition. Dr. Rowland thinks that the colour is often secondary to the softening.

The colourless softening, to which the term *white* softening has been applied, has also been misinterpreted, as the author shows.

Yellow softening, according to Rokitski, occurs under the several circumstances following: 1. It encircles a spot of inflammation. 2. It appears in the neighbourhood of the ventricles in acute hydrocephalus. 3. Around apoplectic extravasations.

Of all the opinions as to the proximate cause of these varieties of softening, that of their inflammatory origin is the most general. The author quotes several writers who hold these views, making particular mention of Dr. Hughes Bennett, who, with Gluge, detected the presence of exudation corpuscles, which were considered as conclusive of the nature of the cases in which they were present. These were commonly seen in the red softening, but less frequently in the white variety. The latter is, according to the author, either the result of fatty degeneration, or it may be the result of obstruction of the vessels leading to the part. The occasional effect of a ligature on the carotid artery is well known, and marked examples have been recorded by us in former Reports.

The diagnosis of softening of the brain from sanguineous apoplexy, is one of the most important questions connected with the disease, and is so regarded by the author. In apoplexy, the attack is generally without warning; in 20 cases in which a clot was found after death it was so. In 20 cases of softening, the comatose seizure was without precursory symptoms only in two. In 16 out of the remaining 18, headache was a prominent symptom, and in 12, paralysis preceded coma. When, therefore, the attack is quite sudden, the probability is that it is apoplexy. Coma of a transitory nature, frequently repeated, is characteristic of softening. The diagnosis of the two forms of softening is chiefly to be made out by the age and general appearance of the patient.

Dr. Rowland concludes his treatise with the treatment of cerebral softening in its various forms. On this subject his remarks are eminently judicious. The impending danger is earnestly to be averted by complete relaxation from intellectual exertion, and the withdrawal from exciting subjects of thought. All the functions are to be maintained as far as possible in a state of regularity. In the actual disease, much discrimination is required in the choice of remedies, and here discrimination is necessary as to the form. In the inflammatory variety general bleeding may sometimes be advisable, but the author is more generally in favour of topical bleeding, counter-irritation, and purging. In many cases a stimulating plan will be required, and quinine, ammonia, and wine will be suitable. In the confirmed disease his chief confidence is in small doses of the bichloride of mercury. His experience is adverse to the use of strychnine.

We here close Dr. Rowland's volume, and in doing so give our cordial assent to its value. But of this we have no doubt many of our readers will convince themselves.

20. A case of softening of the brain has been made the subject of a very excellent paper by Mr. BARLOW, in which every point of interest in the pathology of the disease is minutely described. This author fully appreciates the

important discovery by Mr. Paget of the connection of cerebral disease with fatty degeneration of the vessels of the brain, and states his opinion that the whole subject is worthy of reconsideration in connection with this remarkable change.*

21. *Cerebral Tumours*.—A communication by M. KESTEVEN on cerebral tumours appears in a recent number of the 'Medical Gazette.'† He divides these tumours into two classes, *intracranial* and *epicranial*, according as they make their exit from, or remain entirely in, the cranium. The symptoms of course vary, and the ease with which they are diagnosed very different. One remarkable fact which the author comments upon is the tolerance of their presence which the brain exhibits. This all practical men must have noticed. The bulk of the paper is taken up with reports of cases illustrating this peculiarity, after which he concludes as follows:—

"From what has been said by other writers, as well as from the cases here related, it may be gathered that, although cerebral tumours present so many features in common with other forms of organic and functional disease of the brain, that it is, in the present state of their diagnosis, almost impossible to arrive at a positive conclusion of the existence of such growth in any one case; yet that some of the features which they present, when considered together with the exclusion of other symptoms, may justify a suspicion of their presence, and that the history of their progress will strengthen the suspicion into a strong assumption. Pain is an almost invariable and early indication of the presence of these morbid growths; but, as it is also a sign of many other states of disease, its character must be very closely observed in order to attach it to the cause alluded to. The pain is, in general, strictly local, of an acute or intense and stupefying character, often absolutely agonising, occurring in paroxysms at uncertain periods, and passing off without leaving any other symptom, at least probably for years. The sense of sight, hearing, and taste, after a time become more or less affected. Convulsions frequently occur in the course of their growth: these are not at first followed by palsy, which occurs usually at a late period, after the previous symptoms have been experienced at uncertain times extending over a shorter or longer period. Gastric disorders are pretty sure to occur as the disease encroaches upon the cerebral substance, and they are most frequently met with either during the paroxysms of pain or concurrently with the convulsive attacks which denote cerebral irritation. That the latter should ever be absent is matter of some surprise when we consider how small an osseous deposit will excite epilepsy."

22. *Periosteal Disease of the Dura Mater*.—Dr. GOOLDEN has described, under the above name, an affection of the dura mater, consisting of congestion of the periosteum, including the dura mater, with deposits of earthy matter between the membrane and the bone. He considers it a specific disease, to which certain constitutions are liable, when influenced by any cause which depresses the vital powers, such as the action of mercury, puerperal fevers, and exposure to cold and damp. The diseased action is greatly under the control of iodide of potassium.

It is said to occur at all periods of life, in both sexes, and in married women as well as virgins. Dr. Goolden, from data in which we should place no reliance, considers the disease as unconnected with syphilis. It is indicated by local pain and wakefulness, commencing from eight to ten in the evening, and abating towards morning, when perspiration ensues. The usual seat of the pain is the surface of the tibia and ulna, the cranial bones, the sternum, clavicle, and crest of the ilium.

* Medical Gazette, July 4th and 11th, 1851.

† April 18, 1851.

The diagnosis of the disease is, according to the author, sufficiently facile when it affects the long bones, but when the dura mater alone is the seat of disease, it is often overlooked or mistaken. The most satisfactory results in treatment, are derived from blisters, opium at night, and the exhibition of hydriodate of potassium.

23. *On the Variations of the Sulphates and Phosphates excreted in some Diseases of the Nervous System.*—This inquiry, which is supplemental to the more general investigations in disease by Dr. BENCE JONES, includes the following diseases :

1. Acute and chronic diseases, in which the muscular structures were affected, as chorea.

2. Functional diseases of the brain, as delirium tremens.

3. Acute inflammatory diseases of the nervous structures, as inflammation of the brain.

4. Chronic diseases of the nervous structures.

5. Acute diseases, in which neither the nervous or muscular structures were chiefly affected.

6. Chronic disease of the same kind.

The last three gave negative results.

In illustration of the first class, Dr. Bence Jones details three cases of aggravated chorea. The urine was examined frequently from the third to the eleventh day. The phosphate was found to be diminished; the sulphates were present in very great excess. The urine was found to be so loaded with urea, that nitrate of urea crystallised out before the urine was concentrated. The specific gravity of the urine was as high as 1036 in one case, 1035 in another, and in the third 1031.

In illustration of the second class, three cases of delirium tremens are given. The urine was examined from the fifth to the fourteenth day of the disease. The phosphates were not found to be so remarkably diminished as in the cases reported in the previous paper. The sulphates were found to be exceedingly increased. The amount of urea was so great, that nitric acid caused an instantaneous crystallisation. The specific gravity was, in one case, 1041; in another, 1037; and, in the third, 1027.

In other words, there was the most remarkable correspondence between the state of the urine in acute chorea, and in delirium tremens.

In illustration of the third class, four cases of acute inflammation of the brain are given. The urine was examined from the fourth to the twenty-sixth day. Though the inflammation in these cases was not of so intense a kind as in those which were recorded in the author's previous paper referred to, yet they confirm the statement, that in inflammation of the brain the phosphates in the urine are increased; they also lead to the conclusion, that the sulphates are at the same time increased in the same degree.

In conclusion, the author states the phenomenon common to acute chorea, and to intense delirium tremens, is increased and unceasing muscular action. The muscles, he observes, are highly complex organic compounds, in which sulphur exists in an unoxysed state; and the muscular action is accompanied, if not caused, by an action of oxygen, which, among other results, gives rise to the formation of sulphuric acid and urea; the amount of oxydation being proportioned to the intensity of the muscular action. The result produced is an increase of the sulphates and in the urea of the urine, just as if strong exercise were taken in health.*

* Reported in 'Medical Gazette,' July 11, 1851.

§ II.—*Diseases of the Respiratory System.*

24. The literature of thoracic disease has, since our last Report, been enriched by the publication of a Treatise from the pen of Dr. WALSHE, a gentleman whose name alone is a guarantee for its value.

This volume consists of two main divisions, the first devoted to the principles of physical diagnosis; the other to a description, as concise as is consistent with accuracy, of the separate diseases of the lungs, heart, and great vessels. Of the first part it is not too much to say, that a more complete and exact account of the science and practice of auscultation is not to be met with in any work with which we are acquainted; as was, indeed, to be expected from the author's previous reputation and extensive opportunities.

After an Introduction on the Methods of Physical Examination in General, the author, in Chapter I, exhibits their application to the pulmonary organs, under several sections, embracing,—1. Inspection; 2. Palpation; 3. Mensuration; 4. Percussion; 5. Auscultation; and 6. Succussion. In the Second Part the same appliances are shown in their relation to Disease of the Heart, Arteries, and Veins.

Our limits do not admit of the close analysis of a work of the magnitude of the present; nor, indeed, is it our object in any case to do more than is sufficient to induce our readers to search further for themselves at the original source; we shall, therefore, content ourselves with the notice of such parts only as illustrate the author's own views, more especially on subjects upon which professional opinion is unsettled.

Speaking of the crepitous rhonchus, the author admits that its mechanism is yet undetermined; but it seems most probable, in his estimation, that the sound is produced in the parenchyma of the lung itself, and that its physical cause is the sudden and forcible expansion of parenchymatous cells, glued, as it were, together, by the viscid exudation which fills them.

There is a peculiar form of crepitation mentioned by Dr. Walshe, which might be mistaken by the hasty and inexperienced auscultator for the crepitation of pneumonia; this is a sound accompanying inspiration only, and is produced by the unfolding, on a deep inspiration, of air-cells which are unaffected in calm respiration.

The author's observations respecting those modifications of the vocal resonance, which are known as bronchophony and pectoriloquy, are particularly instructive. These sounds have always been a source of confusion from the difficulty of determining when bronchophony should be said to end, and pectoriloquy to begin, and from the not unfrequent occurrences in which the post-mortem appearances have completely negatived the diagnosis derived from the intensity of these sounds during life. For instance, in one case we may have the most perfect pectoriloquy, and yet the cavity shall be small, or even absent altogether, the intense sound being produced by simply condensed lung; and again, a large excavation may be found in connection with a feeble bronchophony during life. This is all unintelligible to the plain disciple of Laennec, but receives a ready solution in the theory laid down by Dr. Walshe on the conditions upon which intensification of the voice depends. He shows satisfactorily that the simple increased conduction of sound is not sufficient to explain the various phenomena; but that it is necessary also to admit the vibrations of air reflected to a focus, which reflection depends entirely upon the physical condition of the tissues surrounding the cavity.

The conditions of an excavation most favorable to the production of Laennec's

pectoriloquy, are said by Dr. Walshe to be a moderate size; smoothness and density of the internal surface; emptiness; superficial position, and especially adherence to the parietes of the chest; thinness and hardness of that portion of its walls next the surface; and free communication with the bronchial tubes. Irregular and flaccid walls, however large the cavity, are not favorable to the production of intense resonance.*

25. *Diseases of the Throat and Larynx*.—We have several communications to notice with reference, more especially, to the treatment of laryngeal affections by the topical application of the nitrate of silver.

The first is a brochure by Dr. WAGSTAFFE,† which is written with the main object of giving further publicity to the process first promulgated by Dr. Horace Green, and a notice of which at the time appeared in one of our former volumes. The diseases in which the author finds the treatment especially useful, is in the relaxed and thickened condition of the mucous membranes, the result of catarrh; follicular disease of the pharynx; and also in whooping-cough and croup.

— In whooping-cough, we may here mention, that Dr. Wagstaffe's assertions meet with confirmation by Dr. EBEN WATSON, of Glasgow, who has published a paper with the intent to call attention to the superior merits of this once ordinary treatment.‡

—Dr. HUGHES BENNETT§ has also made this same treatment the subject of a clinical lecture, with the details of two cases of laryngitis, in which it was applied by Dr. Horace Green himself, who was at the time in Edinburgh. In both the success was marked. Dr. Bennett gives the following directions for introducing the sponge:—

“The patient being seated in a chair and exposed to a good light, the operator should stand on his right side, and depress the tongue with the depressor held in the left hand. Holding the probang in the right hand, the sponge having been saturated in the solution, he passes it carefully over the upper surface of the instrument, *exactly in the medium plane*, until it is above or immediately behind the epiglottis. He now tells the patient to inspire, and as he does so, drags the tongue slightly forwards with the depressor, and thrusts the probang downwards and forwards by a movement which causes him to elevate the right arm, and brings the hand almost in contact with the patient's face. This operation requires more dexterity than may at first be supposed. The rima glottidis is narrow, and unless the sponge come fairly down upon it, it readily slips into the œsophagus. Its passage into the proper channel may be determined by the sensation of overcoming a constriction which is experienced when the sponge is momentarily embraced by the rima, as well as by the momentary spasm it occasions in the patient, or the harsh expiration which follows,—symptoms which are more marked according to the sensibility of the parts.”

Dr. Bennett continues,—“If the probang be properly prepared, and the operation well performed, the actions which take place are as follows:—1st, The sponge, saturated with the solution, is rapidly thrust through the rima into the larynx, and frequently into the trachea; for if the distance of the probang be measured from that portion of it which comes in contact with the lips, the extent it has been thrust downwards can be pretty accurately

* We shall have occasion to refer again to this valuable work in a subsequent page.

† On Diseases of the Mucous Membrane of the Throat and their Treatment.

‡ Lancet, Oct. 18, 1851.

§ Monthly Journal of Medical Science, Nov. 1851.

determined. In this first part of the operation, the rima glottidis is, as it were, taken by surprise, and the sponge enters, if the right direction be given to it, without difficulty. But, 2d, the rima glottidis immediately contracts by reflex action, so that on withdrawing the instrument you feel the constriction. This also squeezes out the solution, which is diffused over the laryngeal and tracheal mucous membrane. Now, if the sponge be a fine one, it will be found capable of holding about 5ss of fluid, the effect of which upon the secretions and mucous surface almost always produces temporary relief to the symptoms, and strengthens the tone of the voice,—results at once apparent after the momentary spasm has abated. 3d. The action of the nitrate of silver solution is not that of a stimulant, but rather that of a calmative or sedative. It acts chemically on the mucous pus, or other albuminous fluids, it comes in contact with; throws down a copious white precipitate, in the form of a molecular membrane, which defends for a time the tender mucous surface or irritable ulcer; and leaves the passage free for the acts of respiration. Hence the feeling of relief almost always occasioned; that diminution of irritability in the parts which is so favorable to cure; and why it is that strong solutions of the salts are much more efficacious than weak ones. It may be easily conceived that such good effects must be more or less advantageous in almost all the diseases that affect parts so sensitive, from whatever cause they may arise; and that this treatment is not adapted to one or more diseases of the larynx, but, like all important remedies, meets a general indication which the rational practitioner will know how to avail himself of."

26. *Tracheotomy in Œdema Glottidis*.—M. Séstier* has contributed a paper urging the earlier and more frequent resort to this operation in suitable cases. He gives an analysis of 138 cases of œdema glottidis, in thirty-six of which the operation was performed, with the result of preserving life in thirteen, and materially prolonging it in eight. He has also ascertained that the success of the operation very much depends upon the previous healthy state of the larynx, and recommends it chiefly in such cases, but does not consider it contraindicated where prior disease has been known to exist, unless it be of an advanced stage and incurable character.

As regards the time of performing the operation, M. Séstier would not be precipitate, as in several apparently very severe cases the disease has been got under by vigorous treatment. But, on the other hand, he counsels against waiting until no other chance is evident. He is guided by the amount of suffocative dyspnoea, together with feebleness of respiratory murmur.

With reference to the operation itself, the author gives the preference to crico-tracheotomy. It is easier than tracheotomy, and less likely to be followed by the entrance of air into the veins, or of blood into the trachea.

27. *Bronchitis*.—Dr. W. T. GAIRDNER has presented an elaborate essay on the pathological anatomy of bronchitis, and its influence in determining certain states of the respiratory organs, some of which have been attributed to other causes. For instance, the condition usually termed atelectasis is shown to be frequently the result of some obstruction to the tubes, as are also the patches of condensed lung attributed to lobular pneumonia. The effects of bronchitis on the production of emphysema, and the mechanism of that lesion, are also very lucidly shown. The memoir is too long for entire insertion, and will scarcely bear analysis from the concise manner in which it is written; we are therefore constrained to satisfy ourselves with the brief notice of a very meritorious production, and to commend it to the careful attention

* Archives Générales.

of our readers, who may find it in the 'Edinburgh Monthly Journal' of the present year, as also in a separate form.*

28. *Phthisis*.—The chapter on Phthisis in Dr. WALSHE's book above noticed, is a very comprehensive *exposé* of our present knowledge on the subject; and, at the same time, given in a concise style peculiarly adapted to fulfil the objects of his treatise. We shall make only one quotation from it, which will be on the physical signs of *arrested* phthisis, a point not commonly touched upon.

Dr. Walshe informs us that these signs have not yet been systematically examined, and are difficult to be reduced to rule, from the great differences of the conditions under which they occur. He, however, makes the following recapitulation of the physical conditions he has himself met with. These are:

1. Notable depression above and below the clavicles, and above the scapula, imperfect expansion, weak, harsh respiration, dullness on percussion, and strong vocal resonance, where softening had previously existed.

2. Similar depression, imperfect movement and dullness, respiration weak, with dry clicks on deep inspiration. Here softening signs had existed six months before.

3. Dullness on percussion at the apex, feeble bronchial breathing. Here the signs of softening were marked nine months before.

4. Respiration jerking, weak, and bronchial, resonance slightly deficient. Two months previous the dullness had been more marked, and there were all the signs of advancing disease (p. 380).

Dr. Walshe has also met with the signs of a cavity, in a case in which, for the time, all active symptoms had subsided.

29. *The Gums in Phthisis*.—The remarkable appearance in the gums, supposed by Fredericq (Abstract, Vol. xii, p. 218) to be peculiar to phthisis, has been made the subject of a communication to the Medical and Chirurgical Society by Dr. Theophilus Thompson. In this communication, after alluding to the fault of allowing auscultation to supersede attention to general symptoms, the author gives the results of his observations on the existence of the sign here mentioned, and states his conviction of the frequent existence in phthisical subjects of a mark at the reflected edge of the gums, deeper in colour than the adjoining surface; in some patients a mere streak on a raised border, in others a margin more than a line in breadth, of a vermilion tint, inclining to lake: the mark being most distinct around the lower incisors, but usually observable in both jaws, and often around the molar, but modified in its situation by the form of the mouth. The author has examined some hundred cases in the course of the investigation, and gives the analysis of 102, of whom he has full records. In 40 or 48 women the gingival margin is present; and in 54 phthisical men, although in a few the line is so faint as to be open to question, there is only one in whom it can be considered decidedly absent. He has reasons for suspecting that the same condition of the system which produces this state of the gums tends also to produce clubbing of the fingers; but he considers that the change in the extremity of the fingers rarely occurs till some time after the streak is manifest in the gums. Of 76 patients, 45 were found to have clubbed fingers; of these 45 only 1 had gums free from the characteristic margin; yet 20 of the 76 had marginated gums, but no expansion of the extremities of the fingers. The author discusses the effect of various modifying influences, such as hereditary tendency, catamenial disturbances, and habits

* On the Pathological Anatomy of Bronchitis and of the Diseases of the Lungs connected with Bronchial Obstruction.

as respects cleanliness, but cannot connect the presence of the symptoms in question with any of these circumstances; but he is of opinion that causes which irritate the mucous membrane tend to accelerate and increase the manifestation of the margin. He suggests this as an explanation of the more frequent absence of the line in women than in men, and dwells on its practical importance, as indicating, in such cases, the use of refrigerants, as preliminary to the introduction of tonic remedies. The author canvasses the question whether a similar line exists in any other disease; he allows that M. Fredericq may be correct in the opinion that certain changes in the gums occur towards the close of various chronic diseases, but he has never yet observed the peculiar margin described in this communication, without detecting other indications of consumption, although frequently only incipient. As respects prognosis in phthisis, he proposes the general rule, that cases in which the streak is observed early, or is broad or deep-coloured, tend to proceed more rapidly than those in which it is absent or slight; whilst freedom from the streak, even in the third stage, affords encouragement in treatment. In reference to diagnosis, the author believes,—1st. That the absence of the streak in men affected with inconclusive symptoms of phthisis, may incline us to a favorable interpretation of any such suspicious indications; but that in women, rather less weight is to be attributed to this negative sign. 2d. That the presence of the sign in women is almost conclusive evidence of the presence of the tubercular elements in the blood. The paper concludes with the remark, that the symptom therein described is one of many proofs that consumption is *not* exclusively a local disease, but rather a constitutional condition, requiring for its elucidation and treatment far more than an acquaintance, however exact, with the phenomena of auscultation.

30. *Cod-liver Oil in Phthisis*.—Much scattered information may be met with in the journals of the last six months, referring to the use of cod-liver oil in phthisis. The opinion expressed universally is that there is no other remedy or system of treatment which is capable of producing such satisfactory results. We may give references in this matter to the ‘Lancet,’ Sept. 13th, 1851; the ‘Révue Médico-Chirurgicale,’ Août 1851; and the ‘American Journal of the Medical Sciences,’ July 1851.

—Dr. Walshe’s accurate analysis of the experience of this medicine within the walls of the Hospital for Consumption has been already given in a former volume, so that a repetition would be here out of place; we, however, refer the reader to p. 398 of his work above noticed for ample details on the subject.

31. *Pneumothorax*.—In a paper recently published by Dr. HAMILTON ROE,* this disease is shown not to be so fatal as is commonly supposed, and that paracentesis holds out considerable chances of benefit. The probable advantage will, of course, much depend on the cause which has given rise to the disease, which, as the author shows, are very various. The mere presence of air, he observes, is not in itself serious; it is only when it accumulates to such an amount as to threaten life that we are called upon to remove it. Several instructive cases are related in illustration of the author’s opinions.

§ III.—*Diseases of the Circulatory System.*

32. Under this section we continue our analysis of Dr. WALSHE’S volume. —The physical diagnosis in disease of the heart and large vessels is considered

* Lancet, Sept. 1 and 8, 1851.

in several sections of the second chapter of Dr. Walshe's book, commencing, as in the case of the lungs, with a description of the natural situation, dimensions, and sound produced by the organ. On these subjects we have nothing calling for remark, with the exception of the author's opinions on the production of the second sound. The morbid sounds are divided by him into two classes: modified sounds and adventitious sounds. Under the former of these sounds, he alludes to a remarkable, though not very uncommon, phenomenon, the reduplication of one or other sound. Their appreciation is, however, of scientific rather than practical interest, as in the author's experience they are never permanent or invariable, is most commonly met with in functional derangement of the organ, and diminishes in frequency in proportion to the degree in which the heart is organically affected.

The adventitious sounds or murmurs are of two kinds,—Endocardial and Pericardial. The former, it is well known, may be functional or organic. Dr. Walshe knows of no intrinsic diagnostic difference between the two. The distinction is often to be made by the presence or absence of a coexistent venous hum. In the case of the inorganic blood murmur, this is, he thinks, always present. The organic murmurs are minutely described, and are placed by the author in the following order of relative frequency:—mitral regurgitant; aortic constrictive; aortic regurgitant; mitral constrictive; tricuspid regurgitant; pulmonary regurgitant; tricuspid constrictive.

The pericardial murmurs are the various forms of rubbing, grating, and squeaking sounds, all of which are traceable to the contact of the surfaces of the heart and pericardium, roughened by lymph. These sounds, according to Dr. Walshe, are easily distinguished from endocardial murmurs, by their rubbing qualities, superficial character, abrupt limitation, and variability at brief periods of time.

In treating of the several diseases of the heart, Dr. Walshe commences with functional derangement; after which he takes in rotation, pericarditis, hypertrophy, dilatation, disease of the valves, adventitious products, &c.

In the treatment of pericarditis, Dr. Walshe has some very judicious remarks on the use of bloodletting, to which he does not attach much value. Dr. Taylor, however, has shown that if performed early, it indisputably shortens the duration of the disease. Mercury is recommended, although the author fully appreciates the observations of Dr. Taylor upon the subject. Colchicum is advised strongly, especially where the pericardial affection is of rheumatic origin.

Dr. Walshe's accounts of fatty degeneration of the heart are graphic. He says:—

"The physical signs are those of a soft heart, weak impulse, indistinctness of apex beat, unchanged percussion, dullness; a feeble, toneless, short first sound; a long first silence and a feeble second sound. Possibly a dynamic mitral regurgitant murmur may sometimes occur; but I do not know this from observation. The pulse is irregular in force and rhythm, either constantly, or from time to time, under excitement, indigestion, &c. On such occasions it may become exceedingly frequent: I have known it uncountable. . . .

"Unable to undertake any sustained labour, exhausted almost on the first attempt; irritable in temper; easily put out of breath; subject to fits of dyspnoea, but not asthmatical; seized occasionally with palpitation, attended with choking sensations, cardiac uneasiness, pain, or actual angina; readily becoming faint on exertion; and falling into actual syncope from time to time; suffering occasionally from vertigo, aching head, and somnolence; œdematous and livid in the lower extremities and face, these patients are often possessed with the idea that they shall die suddenly." This is a picture from which

the observer can scarcely fail to recognise the disease when it comes before him.

The concluding chapter of this excellent treatise includes the diagnosis and treatment of disease of the large vessels, and is executed with equal carefulness and attention to practical utility.

33. Another valuable contribution to the literature of cardiac disease is a treatise by Dr. NORMAN CHEVERS, now in the Indian Medical Service. The object of this treatise is avowedly to diffuse information on the treatment of the heart and aorta, more especially in reference to the management of such cases in India; but its value is far from being limited to practitioners in Oriental climes. In the first chapter Dr. Chevers gives an account of the various adaptations which the several parts of the heart undergo in disease; and mentions concisely the consecutive lesions in other organs. He then proceeds in the second chapter to the more immediate object of his essay.

The treatment of heart disease is based by Dr. Chevers on six principal indications, to each of which he devotes a separate chapter. These are:—

“1. To diminish, if possible, the valvular or other immediate causes of obstruction.

“2. To endeavour to remove all causes of impediment to the circulation existing in the lungs, abdominal organs, and capillary system generally.

“3. To lessen vascular distension, by reducing the bulk of the circulating fluid, without impoverishing the system.

“4. To sustain or restore the power of the heart, and to reduce the capacity of its dilated cavities.

“5. To equalise the circulation, and to maintain free vascular action on the surface by regulating the temperature, clothing, &c., and to provide due access of pure and well-oxygenised air.

“6. To remove and avert irritation and excitement of the nervous system, and to procure, as far as possible, rest and tranquillity of body and mind.” (p. 12).

1. In fulfilling the first indication, the author points out the importance of early treatment, for while he considers that the early results of inflammatory exudation may admit of absorption, in chronic disease attempts to remove them may prove injurious. The means to be followed are, tranquillity of mind and body, and the long-continued mild courses of mercury alternating with iodide of iron and iodide of potassium. In pericarditis Dr. Chevers agrees with Dr. Walshe in the injurious effects of large bleedings, his chief reliance is placed on local bleeding, counter-irritation, mercury, and colchicum. The author in this chapter also alludes incidentally to the treatment of acute rheumatism.

2. The second indication comprises the removal of all impediments to the circulation. Among these, impediments in the lungs hold a prominent place; but they exist also in the abdomen and general surface. Among the most remarkable causes of cardiac obstruction, Dr. Chevers mentions bronchitis, pneumonia, certain affections of the pleuræ, congestion of the abdominal viscera, distension of the stomach and bowels, anasarca, and obesity. The rules for treating these conditions are eminently judicious, and should be impressed on the mind of every practitioner in cardiac pathology.

3. The third indication has reference to diminishing the bulk of the circulating fluids without lowering the general powers. The importance of this indication is made obvious by the fact, that cardiac disturbance may be caused, simply by the presence of too much blood in the system, as in plethora; it also is a main cause, the author believes, of palpitation in cases of hypertrophy and dilatation,

more blood entering the faulty ventricle than it can readily dispose of. The means by which the author attempts the reduction of the circulating fluid is, —1, by reducing the quantity of fluid injected; 2, by elimination of fluid by the two emunctories, the skin and kidneys; and 3, by occasional small bleedings.

4. In the chapter devoted to the fourth indication, several questions of great interest are cursorily noticed. Hypertrophy of the heart is often, we may say generally, looked upon as a morbid condition, but this opinion, as commonly understood, Dr. Chevers refuses to admit, agreeing rather with those who regard increase of the pustular development of the heart as a compensatory state instituted by Nature for the purpose of overcoming some obstruction, whether in the valves or in a more distant point in the circulation. Dr. Chevers, in fact, has never seen a case of hypertrophy independent of obstruction, nor does he, like Dr. Walshe, admit the existence of concentric hypertrophy.

With reference, also, to the question of the influence of hypertrophy of the heart in the production of apoplexy, the author sides with those who regard the presumed influence as greatly exaggerated. Under the head of treatment he speaks strongly as to the inadmissibility of digitalis; this follows as a matter of course upon his opinions on the compensatory action of the hypertrophied heart; this opinion, we need hardly say, is now very generally received.

5. To equalise the circulation, and retain free vascular action on the surface, by careful regulation of the temperature, is an important part of the management of heart diseases, and as such meets with careful consideration in the author's seventh chapter. Passing over some very pertinent remarks on dress, climate, and temperature, we pass to chapter eight, in which the sixth indication is discussed.

6. In this chapter the author states his belief that spasm or angina pectoris never attacks a perfectly healthy heart. In its treatment he cautions the reader against the free use of opium, justly alleging, as a reason, that if the heart be "fatty," as is often the case, it cannot be expected to bear powerful sedatives with impunity.

We now arrive at the last chapter, comprising the treatment of aneurism of the aorta; but our decreasing space warns us that we must now dismiss our author, which we do with the hearty conviction that his book is one of high practical value, and deserves to be received without qualification as a text book for the treatment of the most important class of diseases of which it treats.

34. *Pulmonary Artery, diseases of.*—We are indebted to the same author for another meritorious treatise* on the morbid conditions of the pulmonary artery, a vessel which has hitherto been considered so seldom diseased that it is barely mentioned in the standard books on diseases of the heart. Dr. Chevers has, however, by devoting many years to its study, clearly shown that the opinion of the immunity of this artery from disease is far from true, and that not only is it subject to numerous congenital malformations, but also is amenable to the action of disease.

As may be imagined, the congenital malformations to which the pulmonary artery is subject, occupy by far the largest portion of the present treatise, being both numerous and varied. All, however, meet with the most accurate demonstration. They are comprised under the following general heads.

1. Irregularities in form and origin.

* Collection of Facts illustrative of the Morbid Conditions of the Pulmonary Artery, by Norman Chevers, M.D., &c., London, 1851.

2. Congenital narrowing.

3. Malformations by excess.

Each of these classes of malformation are associated with various combinations of other irregularities of structure; for a detail of these our space compels us to refer to the original.

Of the diseases to which the pulmonary artery is liable, the first noticed is acute inflammation. The circumstances under which this is liable to occur are stated to be—1. As a sequence of phlebitis, either spontaneous or secondary to parturition or surgical injuries. 2. In morbus Brightii. 3. As a result of rheumatism. 4. As a concomitant of certain forms of pneumonia.

Subacute inflammation of the pulmonary artery is a subject admitted by Dr. Chevers to be involved in considerable obscurity, and is generally considered to be a rare affection. The author is, however, disposed greatly to extend its probabilities of occurrence, by asserting that in all cases in which *adherent* coagula are found obstructing the vessel, inflammation has occurred. In this opinion the author is all but singular, Paget, Dubini, and the majority of pathologists giving a different explanation of the phenomena.

Obliterations of the pulmonary artery, which are next noticed, may take place from aneurism of the aorta; it may also be the subject of dilatation, aneurism, rupture, and, lastly, ulceration. To all these the author draws attention at considerable length.

Considering that so little attention has been paid to disease of the pulmonary vessel, it is not to be wondered at that until Dr. Chevers published his present elaborate investigations no well-digested rules of diagnosis should have existed, nor that in presenting them now the author should do so with diffidence. Indeed he admits the impossibility of detecting all the various malformations alluded to in his essay; but he believes that the following general rules will be of service as illustrating the principles of diagnosis.

“Where the symptoms of morbus cæruleus are not developed until some days or weeks subsequently to birth, it is probable that the orifice of the pulmonary artery is narrow, the ventricular septum open, and the foramen ovale and arterial duct either closed or distinctly contracted; or the latter of these passages may have become narrowed or closed, while the former is widely pervious.

“If the infant be upwards of a year old, it is in the least degree improbable that it suffers from the malformation usually known as “distribution of the descending aorta from the pulmonary artery.”

“If the child has survived its fourth year, transposition of the great arteries is scarcely to be suspected.

“When cyanosis is present at about the age of three or four years, it is probably due, either to great contraction, or closure of the pulmonary orifice, with ventricular communication. Should a single systolic bruit be heard superficially in the region of the pulmonary orifice, the case will almost certainly prove to be one of the former kind.

“At the age of one month, or at any subsequent period, it cannot be judged with any probability that the heart literally consists of only two cavities.

“In early infancy there are no means of diagnosing between imperforation of the pulmonary artery and transposition of the two main arteries, except that the former irregularity is of far more frequent occurrence than the latter.

“If the patient be above the age of seventeen years, imperforation of the pulmonary orifice can scarcely be suspected.

“A person above the age of sixteen years, or a young adult, suffering from

cyanosis of long standing, a bruit being audible in the region of the pulmonary artery, most probably has contraction of the orifice of that vessel, with perforation of the septum ventriculare.

“If the individual has passed the period of early youth before becoming the subject of cyanosis, or if that symptom, formerly scarcely perceptible, has become considerably more apparent of late, it is, at first sight, probable that the disease is congenital narrowing of the pulmonary artery, the impediment having latterly been increased by thickening and further contraction of the parts, consequent upon superadded disease. In this case it is probable the ventricles do not communicate.

“If the patient have passed the age of thirty years, the existence of congenital deficiency of the ventricular septum is highly improbable. Those who suffer from a congenital cause of obstruction which has originally been sufficient to arrest the development of the septum, rarely attain to an advanced age.”

The diagnosis of inflammatory changes in the pulmonary orifice is unsatisfactory, and chiefly depends on the superficial character of the systolic bruit. Dr. Ormerod (‘*Edin. Med. and Surg. Journal*, 1846) has endeavoured to lay down more definite rules in the existence of a murmur at the base, extending from the left third intercostal space to the middle of the left clavicle for a space of two inches; but the author does not believe it possible to mark out the limits with such precision.

§ IV.—*Diseases of the Chylopoietic Viscera.*

35. *Physical Examination of the Abdomen.*—Under the title of ‘Physical Diagnosis of Diseases of the Abdomen,’ Dr. BALLARD has published a very instructive series of papers, pointing out the aid to be derived in diagnosis from the various modes of physical examination now in use. The first exhibits the signs to be derived in health from inspection, mensuration, palpation, and auscultation of the abdomen, and then compares the signs, as modified or produced by disease of the several organs contained in the cavity. After this general review, he proceeds to a more minute examination of the physical signs afforded by each organ, beginning with the liver, and passing on successively to the kidneys, spleen, stomach, &c. These papers, which are as yet unfinished, must be regarded as a valuable contribution to clinical medicine, and as such are deserving of careful study.*

36. *Intestinal Obstruction.*—The subject of internal strangulation of the bowels is ably discussed in a paper recently published by Mr. R. R. ROBINSON.† The points to which he chiefly turns attention are the following series of causes of obstruction,—1. Obstruction from strangulation of the intestine. 2. Obstruction from membranous bands. 3. Obstruction from the calibre of the intestine being girt round by the omentum and mesentery, one portion of intestine being twisted on another. 4. Obstruction from a combination of the two last-mentioned causes. Each of these lesions are separately described and illustrated by admirable woodcuts.

The symptoms to which these various causes of obstruction give rise, are thus described:

Pain.—This varies in degree, kind, and extent, in different cases. In some it is a dull and heavy sensation; in others there is no pain; in others it is acute, increased or not by pressure; and in others it occurs in a spot distant from the seat of obstruction.

* *Medical Gazette*, July 18, et seq.

† *London Journal of Medicine*, July 1851.

Constipation is an almost universal symptom. *Vomiting* is also said to occur in every case;—this, however, is not the fact.

Hiccup is an uncertain symptom. The pulse is very various in different cases, and at different stages of the disease. The *tongue* offers no distinctive characters.

Of the *diagnosis* the author observes, that in the early stage it is not easy to define the nature of the disease. The diseases most likely to be confounded with internal strangulation, are colic, enteritis, stricture, malignant disease, and intussusceptio. From the latter it cannot be distinguished by any unerring symptoms.

The author admits the great difficulty, amounting, in some instances, to impossibility of diagnosing one form of obstruction from another. For the treatment of this affection, see Art. 55.

This paper concludes with the following summary:

1. The *ileum* is that part of the intestinal canal where internal obstruction is most likely to occur.

2. Membranous bands (probably the result of former peritonitis) are the most frequent cause of obstruction.

3. Partial is more likely than general peritonitis to lead to obstruction.

4. All the convolutions of the intestines may be united together without obstruction.

5. Mechanical, although the direct, is not the sole cause of obstruction, as there is reason to suppose the mechanical cause has been in existence some time before the symptoms show themselves; other causes must therefore arise to produce them, and the most frequent of these are sudden and violent exercise, and errors in the quantity or quality of food.

6. It is *possible* for a spontaneous cure to arise from inflammation and ulceration of an obstructing band.

7. The same consequences are seen in internal intestinal obstruction, as are seen in other obstructed canals,—viz., hypertrophy and dilatation above the stricture; atrophy and contraction below it.

8. The symptoms vary considerably in different cases.

9. The order in which the symptoms arise is as important as the symptoms themselves.

10. There are no symptoms by which one obstructing cause can be clearly distinguished from another.

11. The duration of the disease varies much in different cases.

12. The strength of the patient should be maintained.

13. Bleeding should be employed with great caution.

14. The seat of obstruction may be very apparent, and yet deceptive.

15. An operation is only justifiable as a forlorn hope.

16. As a rule, when an operation is resorted to, the central incision is to be preferred.

17. There is reason to believe that metallic mercury has proved useful; and it is in obstruction from membranous bands chiefly, if not solely, that benefit is to be expected from its use.

— Three cases of intestinal obstruction are reported by Mr. BENJAMIN PHILLIPS. The first is a case of pure ileus, in which an operation was performed without success. The second was an instance in which the symptoms were produced by an abnormal direction in the intestinal canal. The third was a case of partial inguinal hernia.*

— A case of obstruction from strangulation by the appendix vermiformis, is

* Medical Gazette, Aug. 8.

also narrated by Mr. GEORGE LANE,* and is interesting in several particulars. The patient had been subject to repeated minor attacks of the same nature, which commenced and ceased suddenly, pointing out some persistent cause of impediment, increased at intervals by some concomitant temporary cause. It was also remarkable, that the pain complained of was on the opposite side, so that an incision directed to the seat of pain, would have been useless.

37. *Ascites*.—The French have of late been attempting to cure ascites by injecting iodine into the peritoneal cavity; and cases of success have, from time to time, appeared in the French journals. The latest on record are those by M. COSTES, of Bordeaux, an account of which may be found in the '*Gazette des Hôpitaux*.'†

38. *Diabetes*.—We have placed this disease among the maladies of the chylopoietic viscera, in compliance with the most enlightened views of its pathology now entertained. What the exact nature of the affection is, is however still a mystery. The most important information connected with the subject, arises out of some experiments by M. BERNARD, on the production of sugar in the liver, independently of the ingesta, noticed by us in a former volume, (ix, p. 255.)

The experiments upon which his views are founded are, however, so well described and commented upon by a writer in the '*American Journal of the Medical Sciences*,'‡ Dr. DONALDSON, of Baltimore, that we do not think our readers will regret a return to the subject.

Dr. Donaldson observes that M. Bernard's attention having been called to some obstinate cases of this affection, which had resisted all efforts to cure them, notwithstanding the exclusive use of azotised food, he determined to see if he could solve the question how sugar could continue to exist in such quantities in the urinary secretion when there was nothing digested which could furnish it to the system. He commenced his experiments by taking two dogs of the same size and age. One he put upon an amylaceous and saccharine diet, and the other upon meat exclusively. In a few days, by means of a syringe introduced into the jugular, he drew some blood from the right auricle of each of them, and after permitting the clot to form he tested the serum for sugar, and to his surprise, he found that in both was a large quantity. Astonished at this, he repeated a number of times the experiment, with always the same results, invariably finding sugar in the right auricle, whether the animals had been kept on nitrogenised or non-nitrogenised substances, and even when they had consumed no food for days. Pursuing his researches, he attempted to discover where the sugar came from, knowing that the right side of the heart could only be its receptacle. He accordingly examined the contents of all the venous trunks, the vena porta, the inferior and superior cava, the jugular, &c., and, singular to say, he could nowhere detect its presence but in the hepatic veins and in the ascending cava, and thence to the right auricle. There being no trace of it in the blood flowing into the liver, nor yet in the pulmonary artery, was not our experimenter justified in coming to the conclusion that it was fabricated in the liver and destroyed in the lungs? That there were two sources from which the system obtained sugar: one from aliments, and the other from the liver as one of its proper normal secretions?

Not content with this, he examined the parenchymatous tissue of the principal organs, and found a large quantity of sugar in the liver, some traces of it in the lungs, but he was unable to detect it in any other. Elated with what

* Medical Gazette, Aug. 29, 1851.

+ Revue Médico-Chirurgicale, Juillet, 1851.

‡ July 1851.

he now considered his brilliant discovery, he reported it to MM. Pelouze and Dumas, two of the most eminent chemists in Paris. They, naturally incredulous in regard to a point so calculated to upset the established doctrines as to the formation of sugar, insisted that there must be some mistake, and after witnessing the experiments, they resorted to the plausible theory that as the liver had the peculiar property of retaining and accumulating within its tissue certain metallic poisons, as arsenic, &c., it was probable that the animals which had been fed upon nitrogenised food or kept fasting had a few days previously eaten amylaceous substances, and thus the sugar formed from them had not all passed off from the liver. To show the correctness of his opinion, M. Bernard kept dogs for six weeks from all species of nutriment from which it was possible that sugar could be formed, and still as before he found it both in the blood coming from the liver and in the organ itself. With the energy for which he is so justly distinguished, he continued his investigations on different animals, and satisfied himself that sugar was to be found as the secretion of the liver of the horse, the ox, the dog, the cat, and the rabbit; moreover, that it exists in birds, fish, reptiles, even in oysters and snails. And what is still more conclusive as to its being produced in the tissue of the liver, is that it can always be detected in that organ of a foetus after the fifth month. Further still, the foetus of oviparous animals which are separated from the mother have exactly the same kind of sugar in their liver and in no other organ!

Following up his experiments, M. Bernard has proved conclusively that the sugar he had found was a secretion by showing the influence of the nervous system over its production. As an irritation of the ophthalmic branch of the fifth pair leading to the lachrymal gland produced a free flow of tears, so a slight galvanic shock, or irritation with a knife applied to the medulla oblongata at the point of origin of the pneumogastric nerve, caused an increase in the secretion of sugar; so much so that a large quantity was carried off in the urine a few minutes after the operation. A violent shock to the corpora olivaria, or the cutting through of the nerve, would arrest the secretion, as was shown by autopsies made some hours afterwards. The author gives these not merely as statements made by the professor, but as confirmed by experiments repeated in his presence. He has seen several instances where cases of diabetes were produced in dogs and rabbits at pleasure—the urine drawn off previous to the operation giving us no evidence of the presence of sugar, whereas that voided twenty minutes after contained a large quantity, as did the blood and every secretion except the saliva, into which it never enters. So true is this that, in one instance, M. Bernard detected it in the urine of some kittens who had been fed by a cat, on whom he had a few minutes previously operated, showing that it had been transmitted through the milk. He has witnessed the arrest of the secretion by a violent shock to the nervous system, and by the communication of the nerve being destroyed, so that the urine, which a few minutes previous had contained a large quantity, was rendered perfectly free from it. Subsequent experiments have somewhat modified this last fact, M. Bernard having in some cases produced the secretion by irritating the olivary eminences notwithstanding the previous severance of the nerve. The probable explanation of this is that the grand sympathetic also serves as a conductor, as in a case of diabetes observed by Duncan; its volume below the diaphragm was found to be three or four times greater than what it normally should be. The portion of the medulla oblongata which appears to be most intimately connected with the production of sugar in the liver is not more than three lines in diameter, lying in the groove between the corpora restiformia and the corpora olivaria, and over the adjoining part of the latter.

M. Bernard can predict the amount which will be secreted from the depth of his incision; if the instrument employed is not thicker than a millimetre, or the twenty-fifth part of an inch, the proportion in the urine will be four parts in a hundred. Beyond a certain point, of course, there is great danger of killing the animal or of arresting the secretion.

The continuance of the presence of sugar in the urine after the operation is variable according to the animal experimented upon, and also the manner employed. In general in the rabbit it lasts forty-eight hours, and in the dog four days, and in one instance as long as seven days.

There were several phenomena which presented themselves as accompanying these experiments which are well worth noticing. The animals were continually in motion; their excitability was such that one might have supposed that some preparation of strychnine had been used. This continued until the sugar could no longer be discovered in the urine, as did also the acceleration of the respiration, which can be explained by the extra duty the lungs had to perform in destroying so large a quantity of sugar. May not this excessive fatigue of the respiratory organs account for the liability of diabetic patients to pneumonia and phthisis, which so often are the cause of their death. A curious fact elicited was that the temperature of the body was diminished several degrees. This is singular, as M. Magendie, judging from the fact that the amount of sugar secreted was greater in birds and other animals where the temperature was higher, and indeed in proportion to the elevation of the temperature, had supposed that its destruction in the lungs was one of the causes of animal heat. In the rabbits rendered diabetic there was an increase of the urinary secretion, as there generally is in the human subject. The amount of salts appeared to be diminished, but this was owing to the quantity of liquid. As to the perspiration, which in man is to a great extent suppressed, it was difficult to decide in the animal.

The secretion of sugar may be arrested by different causes, as an acute pain caused by any operation on the nervous system, such as exposing the medulla oblongata, or pricking the sciatic nerve. Indeed, in renewing his experiments on the excitability of the eighth pair, M. Bernard has been surprised to find that often instead of augmenting the secretion, he has caused it to disappear, though the irritation appeared but slight; and now he acknowledges that the suppression takes place as a result of almost any lesion of the nervous system, except that of the olivary bodies and of the space about them, before mentioned. Diseases, such as intermittent fever, pneumonia, &c., or indeed anything which affects sensibly the nervous system, interrupt this secretion. There was a case in the service of M. Andral of a diabetic woman who ceased to discharge sugar in her urine at each attack of diarrhoea, to which she was subject. A slow lingering death from any cause has this effect. It is known that frequently in diabetic patients there is an absence, during the last stage of the disease, of the presence of the characteristic symptom in the urine caused by the complete exhaustion of the nervous energy. So it is not surprising if sometimes no sugar is found in the liver of patients who have died of diabetes. M. Bernard has invariably detected the presence of sugar in the livers of different animals, as he procured them from the butchers. Anxious to get a human liver of a subject that had not died of a disease which, by its long continuance, might have affected the saccharine secretion, he obtained that of a man who had been guillotined the day previous, and experimenting upon it before the class, he found it contained somewhat more than an ounce of diabetic sugar. A short time previous, he had had an opportunity of examining a patient of M. Rayer, who had for a long time been suffering with glucosuria, of which he had died suddenly; the amount of

sugar in his liver was two ounces and a half, more than double that of the healthy one. In general, animals who eat amylaceous substances, secrete sugar in greater quantities than others, and the longer abstinence is prolonged the less the liver contains. Adults require and secrete more than the young.

As we mentioned before, the only kind of sugar which is assimilable is the grape, and all the other varieties are converted into it by the combined action of the bile and the pancreatic juice before being taken into the general circulation. The sugar found in and secreted by the liver differs from the ordinary glucose only in certain physiological properties, in being more readily absorbed into the circulation, while it is more easily and in greater quantities destroyed in the lungs. It is proved to be of the second variety, moreover, by its difficult crystallisation, by its reducing the salts of copper, and from the fact of its refracting rays of light to the left. It is distinguishable from the sugar of milk because the latter is indestructible in the blood, and never ferments, and it also corresponds in every particular to the saccharine matter of diabetic urine.

The interesting question arises as to what becomes of the sugar, whether secreted by the liver or formed from alimentary substances. We have seen that it is destroyed in the lungs, where with the blood it is exposed over a large surface to the contact of the air. M. Bernard proved by a simple experiment that the destruction of sugar was not, as was its production, under the influence of the nervous system; but altogether a chemical phenomenon. He cut both the pneumogastrics of an animal, and injecting some grape sugar into the blood, found that it was consumed, as in the case of the integrity of the nerves. Moreover, sugar in blood disappears when in contact with air out of the body, as well as in the lungs. It is necessary that the blood should be alkaline for this to take place, for if an acid be added, the destruction is prevented. The contrary is the case in regard to cane sugar, the presence of an alkali interfering with its being destroyed. Attempts have been made to render the blood of animals acid by the injection of vegetable acids, but death has always ensued too soon. M. Bernard found on adding an alkali to blood coming from the liver, that the destruction of the saccharine principle took place very gradually, and he is disposed to believe that the usual alkalinity of the blood favours, but is not the cause of the consumption of the sugar, which is owing to a peculiar organic matter, some ferment which he has not yet been able to seize. He thinks this supposition probable from knowing the effect in other parts of the economy of animal substances which exist in very small proportions, and which apparently have but little power; the diastase, like the strong acids, converting amylaceous matter into sugar. This ferment acts not like yeast, by producing alcohol and carbonic acid, but by converting the sugar into lactic acid and carbonic acid; the latter of which is exhaled from the lungs. In the artificial diabetes produced in animals, the amount of carbonic acid given off by the lungs was much greater than it was before the experiments; and furthermore, their arterial blood became much darker, and gradually resumed its normal tint as the excess of sugar diminished. Thus it was proved that the amount of carbonic acid was in proportion to that of the sugar. It is calculated from experiments by injecting this diabetic sugar into the veins, that the lungs can destroy over and above what they ordinarily do, as much as five drachms (3v,) whereas of the common grape sugar only one drachm (5j); all above this passing off in the secretions. Cane sugar thus introduced is found untouched in the urine.

If the secretion of sugar by a lesion of the olivary bodies surprises physiologists, its arrest by any trouble of the nervous system should not, for it has often been observed that the secretion of the mammary gland can be

altered in quality or even entirely suspended by a strong moral impression, and still more by an acute physical pain. In the same way, a violent passion or fright has affected the formation of the bile, the elements of which remaining in the blood, cause a jaundiced appearance of the eyes, the skin, &c.

This discovery of this hepatic secretion shows us the nature of diabetes mellitus, for that disease has as its principal symptom an excess of this identical sugar.

At first Bernard was inclined to believe that the cause of the production of an abnormal quantity was some affection of the eighth pair of nerves, but his more recent researches have somewhat modified this opinion. Whether the primary lesion exists at their point of origin or in the liver itself it is difficult to decide. This organ is generally hypertrophied, but its anatomical examination has as yet shown nothing. The ancient theories, explanatory of this singular disease, are proved in a great measure to be groundless. The hypertrophy of the kidneys and the lungs as described by M. Rayer is accounted for by the extra duty they have to do; the one in eliminating the sugar from the blood and the other in its consumption.

Rollo regarded it as the effect of a disease of the stomach in which the gastric juice contains a principle not found in the healthy state, which acts upon starch, converting it into sugar. M. Bouchardat in urging this view, states the fact that large quantities of sugar have been found in matters vomited by diabetic patients, but this is no proof, for, as we before mentioned, the gastric juice itself, like the other secretions, contains more or less where from any cause there is an excess in the system. The ingenious reasoning of M. Bouchardat is rendered unnecessary, it being now established that it is not only from feculent substances taken into the stomach that sugar is formed. Moreover, it is not necessary, as he states, that sugar should first be transformed into lactic acid before being absorbed, it having been proved that grape sugar as such enters into the circulation and passes off by the lungs. M. Mialhe's idea of diabetes is founded upon two suppositions, both of which are gratuitous. In the first place, it is not the alkalinity of the blood which destroys the sugar, it being merely an accessory; then the suppressed cutaneous transpiration does not render the blood either acid or neutral, for it remains invariably, so Mr. Bernard stated, alkaline.

Experiments of suppressing the cutaneous exhalation of animals by varnishing them all over have neither rendered them diabetic nor yet altered the alkaline character of their blood. In admitting that the diabetic state is an exaggeration of a natural function of the liver and consequently a disease of that organ, it still remains to be determined what are the causes and how they act to produce it. It is not only the thirst which is increased in persons suffering with this disease, but the activity of all the nutritive functions is greater; the appetite is more craving; the respiration accelerated, &c.

The great frequency of this disease in England and Germany, where it is common among children and very old persons, though it more generally attacks the middle-aged, is accounted for by the habitual use of fermented liquors, which, it is said, favour its development. It is believed that debilitating causes, bad food, excesses, the passions, low and unhealthy habitations, render its production more easy.

The last point we propose noticing is the therapeutical application which, after all, ought to be the end and aim of all scientific medical researches. As it is certain that aliments which contain sugar or starch increase the amount of saccharine matter in the urine of diabetic patients, and thus aggravate the disease, they should, as far as possible, be avoided. In this way, we are able to destroy a part of the morbid element; but it is positive that, notwith-

standing their suppression, the sugar continues to show itself in the secretions.

M. Bernard has found that the acids and ammoniacal preparations recommended by some, fatigue the stomach and effect but little; the efficacy of astringents has been much overstated. Quinine, in combination with iron, has produced good results. Any remedies which act decidedly upon the nervous system, such as alkalis (urged by Mialhe), iodine (tried by Lugol), opium, creosote, mercury, &c., are beneficial, but unfortunately their effect is but temporary, the constitution soon becoming accustomed to them. M. Bernard hopes that observers will in future direct their attention in their treatment to the liver and to the nervous system, and these experiments may yet give us some valuable results, now that the nature of the disease is settled.

39. *Is the appearance of Albumen in the Urine a Favorable Sign in Diabetes?*
—M. RAYER makes this question the subject of some practical remarks in a paper read before the Biological Society of Paris. He alluded especially to a case which he saw in consultation with M. Landouzy, which had improved, to a certain extent, under the use of alkalies, with abstinence from farinaceous matters, when albumen was detected in the urine. There were, however, no other signs of Bright's disease; and the appearance of albumen was a phenomenon for which M. Rayer had no ready explanation.

MM. Dupuytren and Thénard considered, that when albumen appeared in the urine of a diabetic patient, it was indicative of improvement, being, as it were, a transition stage between the saccharine state and that of health. M. Rayer, however, is disposed to regard the change as not salutary, as in cases witnessed by him, though the sugar disappeared, the occurrence of œdema showed that the change was not for the better. In fact, in more than one case, although there was no recurrence of sugar, the patient died of one or other of the consequences of albuminuria.

A case narrated by Dr. Christison also proves, that the appearance of albumen in the urine may be an indication of a serious complication, to be followed soon by other symptoms of renal disorganisation. The case was that of a man, æt. 40, who had been the subject of diabetes for two years. Unexpectedly it was found that the urine coagulated by heat and nitric acid, and that its specific gravity became lower, until at length it was as low as 1010, without any traces of sugar being present. The man soon after died from diarrhœa, and after death his kidneys were found in an advanced stage of granulation. It may, therefore, be taken as a pathological fact, that though in some cases the substitutions of albumen for sugar in the urine of diabetics may be a good sign, in others it may indicate a serious complication.*

We here close our Report on Practical Medicine for the past six months. On the subjects connected with Diseases of the Urinary System and Skin, and with Materia Medica, we have nothing to add to such notices as appear under the several sections of the Abstracts. We may except papers by Dr. HUGHES BENNETT and Dr. OWEN REES on Albuminuria, which we postpone to our next volume.

* Archives Générales.

II.

REPORT ON THE PROGRESS OF SURGERY.

THE domain of Practical Surgery has had few or no additions in the past six months which can strictly be termed novelties, but several subjects of interest have received more ample elucidation; as, for instance, the treatment of aneurism by pressure, perineal section in stricture, and the treatment of diseased joints by free incision. The two forms of these processes have not been treated without the intermixture of a considerable degree of personal animosity, in no wise conducive to the better understanding of the subject, and but little creditable to the parties concerned. We gather from what we have read, with regard to the treatment of aneurism by pressure, that it is chiefly applicable to aneurism of the brachial and femoral artery, and, in the majority of cases, if judiciously carried out, cure the disease; but it has the disadvantage of being often tardy in its operation, and accompanied with so much pain that it is questionable whether it is to be preferred to the simple operation of the ligature when the subject is healthy, and no circumstances exist which are calculated to cause a wound to be prejudicial; the tediousness of the process in many cases has caused the patient to refuse to submit to it, and to demand the ligature.

Much misapprehension as well as angry discussion appears to have arisen respecting the perineal section. Its chief advocate, Mr. Syme, publishes numerous cases in disproof of the impression that it is a dangerous operation; while, on the other hand, scattered instances are recorded in which disastrous consequences and death have been laid to its charge. When the communications on the subject are more fully divested of partisanship, its true merits will be more justly appreciated. As the question at present stands we are disposed to side with Mr. Syme, and take this opportunity to correct a misapprehension which has arisen out of the remarks of our reporter on surgery in a former volume.

Of Mr. Gay's proposal to make free incisions into diseased joints for the purpose of favouring ankylosis, by removing the morbid contents, we entertain the most favorable opinion, as, doubtless, will also our readers, when the subject is laid before them in detail.

Bibliography.

The surgical works which have reached us are the following:—

I. *Lectures on the Principles and Practice of Surgery.* By BRANSBY B. COOPER, F.R.S.

II. *On the Transmission from Parent to Offspring of some forms of Disease, &c.* By JAMES WHITEHEAD, M.D., F.R.C.S.

III. *The Spine; its Curvatures and other Diseases, their Symptoms and Treatment, &c.* By CHARLES VERRAL, M.R.C.S., &c.

IV. *The Anatomy and Diseases of the Prostate Gland.* By JOHN ADAMS, F.R.C.S., &c.

1. Mr. COOPER'S Lectures, now published in a comprehensive volume, are the transcript of the doctrines which the author has been for many consecutive years in the habit of teaching in the school of Guy's Hospital; and as such furnish the student with a clear epitome of the science and practice of surgery as now established. The subjects treated of are those which are generally introduced to the notice of the surgical student; but in the order in which the author has arranged them, we find an evident improvement on the ordinary routine. The surgery of the regions may be referred to as particularly illustrating our meaning. The first lecture is on the blood in its physiological condition, an acquaintance with which the author rightly deems of essential importance to the comprehension of disease; from this he proceeds to inflammation, irritation, morbid poisons, wounds, diseases and injuries of bones, &c.

The surgery of the regions includes hernia, diseases of the rectum, bladder, genital organs, breast and vascular system; and the volume concludes with chapters on tumours, amputation, and the venereal disease. We shall have occasion to refer to some of these particulars in the several sections of the present Report, and therefore shall in this place merely commend the work to our readers as a most valuable book of reference, and to the busy practitioner who will find therein all that is really valuable divested of all unnecessary detail and profitless speculation.

2. Dr. WHITEHEAD'S volume contains the results of much minute inquiry into the facts of laws which regulate the hereditary transmission of disease. We notice it in the present Report from the circumstance that the disease principally illustrated, viz., syphilis, is generally considered to be the province of the surgeon. The book itself is made up of five chapters; the first treats of hereditary transmission in general, the second contains the details of thirty-three cases of inherited syphilis, the analysis of which is given in the third. The succeeding chapters are occupied with a description of the external manifestations and the treatment of constitutional syphilis.

Of late years the subject of syphilis has been, it may be said, restudied; and the once unquestioned authority of Hunter has been made to yield precedence to the dicta of a more enlightened series of pathological observations. In this, as in some other questions, on account of a peculiar facility of investigation, our continental brethren have taken the lead, and it has been ascertained, that not only is the disease propagated by the intercommunication of persons in whom it exists in its acute, or as it is generally called its primary form, but that it is capable of transmission in its secondary or constitutional existence. The author of this present treatise is a strong believer in this latter phenomenon of syphilisation, and the main object of his work appears to be to prove not only that if a man has once had syphilis he may infect the woman with whom he cohabits, but that secondary symptoms are communicable, and that the virus may be also transmitted by the breast milk, and still further, that contamination may ensue through the act of vaccination.

Another novel, and, if true, most important feature of the present work, is the bringing under the domain of syphilitic affections many diseases of the womb, generally considered to be of more specific origin, such as engorgement, granular ulcer, and cauliflower excrescence, the physical signs by which he supposes the syphilitic nature of these affections are minutely described; but these we reserve for our Report on Midwifery.

The contents of the last chapters, on external signs and treatment of constitutional syphilis, will also be deferred to a further page.

3. Mr. CHARLES VERRAL adds another to the numerous list of works on

spinal curvature and other diseases of the vertebral column. His reasons for publishing on this somewhat hacknied subject are, that although existing works are numerous, he knows of none which affords all the information required for the successful management of spinal cases, and moreover that unusual opportunities which he has had at his command have well qualified him for the work he has undertaken. In the arrangement adopted by him he first gives some general introductory remarks on the nature of deformities of the vertebral column, after which he treats of individual affections under the following heads:—lateral curvature; caries of the spine, or angular curvature; paralysis as caused by disease of the spine; psoas abscess; excurvation; incurvation. He also appends chapters on rachitis, spinal irritation, and hysterical affections of the spine.

This work embodies the observations of a gentleman, who, from peculiar circumstances, has had extensive experience of disease of the spine, and may be taken as a safe guide by the practitioner who is not fully conversant with the subject. It is free from the spirit of Charlatanism which too often prevades similar works, the diseases in question having been seized upon by a section of that horde of quacks which leaves in the present scarcely any department of the healing art undefiled by their touch.

§ I.—*Injuries and Diseases of Arteries and Veins.*

1. *Treatment of Aneurism by Compression.*—The journals of the last six months contain reports of several cases in which compression was resorted to in the treatment of aneurism, and as now the profession seems disposed to experimentalise on the subject, we shall doubtless, in a short time, be able to arrive at a just conclusion respecting the value of the operation, and the cases in which it is appropriate.

The first case we shall mention is one related to the Medical and Chirurgical Society by Dr. O. B. Bellingham,* who has laboured so meritoriously to introduce the operation to the notice of the Profession. The case was one of popliteal aneurism of large size. The treatment was commenced by placing the patient on rigid diet, the horizontal posture, and daily purgatives. Compression was commenced on December 4th, at 11a.m., by means of two instruments, one applied over the ramus of the pubes, the other on the lower third of the thigh. Next morning the pulsation had ceased and the tumour was hard and solid. Moderate pressure was kept up for several days.

Dr. Bellingham appends a table of all the cases in which this treatment has been carried out in Dublin during the last seven years. Of these 26 were cases of popliteal aneurism, 21 of which were cured; 6 were cases of femoral aneurism, of which 5 were cured, the sixth having been a form of traumatic aneurism in which amputation of the limb was the only resource. Three were cases of brachial aneurism, of which 2 were cured; in the other, a high bifurcation of the brachial artery existed, and 2 vessels required to be tied. One was a case of radial aneurism, which was cured by compression. Of the remaining 5 cases of popliteal aneurism, amputation of the limb was performed in 1, the patient recovering; in a second, the ligature was used with success; in a third, the patient was obliged to return to his employment before the cure of the disease; the aneurism diminished in size, and the patient continued to work for above three years afterwards, when symptoms of aortal aneurism supervened, under which he sank. In a fourth, the patient died of pulmonary

* Medico-Chirurgical Transactions, vol. xxxiv, 1851.

disease, and the fifth patient, who was of a broken-down constitution, died of erysipelas.

The author also gives a comparative statistical account of the results of treatment by compression and by ligature. Of 36 cases in which compression was employed, a cure was effected in 29; of the remaining 7 the artery was tied in two, the patients recovering. In 1 the pressure was discontinued. In 2 amputation was performed; and in 2 others death occurred, in 1 from pulmonary disease, and in the other from erysipelas. In both, the aneurism was nearly cured. These results he contrasts with those of ligature of the femoral artery. In Norris's Statistics, 'American Journal of Medical Science,' 188 cases are given, of these 142 were cured and 46 died, 6 of the cured cases requiring amputation.

It cannot be disproved, as, indeed, Dr. O. B. Bellingham admits, that the treatment has not been so favorable elsewhere as in Dublin. He accounts for this on the supposition that the instruments have been defective, or that an unnecessary degree of pressure has been used.

The author does not advocate compression indiscriminately; he would not employ it in diffused aneurism; nor in very large aneurisms. He strongly urges the importance of being provided with suitable instruments, and prefers Carte's, of which we have given a drawing in a former volume, to all others.

—Mr. WARD of Huntingdon gives a case of popliteal aneurism, in which compression was successful, but a period of more than three months elapsed before pulsation was entirely suspended.*

—Another instance of popliteal aneurism occurs in Addenbrooke's Hospital, Cambridge, under the care of Mr. HUMPHRY. The pressure was made by a Santorini's tourniquet in the middle of the thigh, and another of the common kind at the groin. Great pains were taken to completely stop the circulation, and after fifteen hours the pulsation in the tumour had ceased. In two months he was moving about on crutches.†

—Other successful cases are to be found recorded by Dr. WATSON‡ and by Mr. WARD.§ The first of these was remarkably rapid in its progress, the pulsation in the tumour ceasing within thirteen hours after the application of the compression. Mr. Ward's case was treated, in the London Hospital, by Dr. Carte's instrument, combined with the use of a weight of six pounds on the ramus of the pubes where the femoral artery passes out.

—Among the unsuccessful cases in which pressure was tried, we find two in which the artery required tying, subsequently; one of these was under the care of Mr. Lawrence,|| and recovered; the other a patient of Mr. Hilton's,¶ died of gangrene of the limb and purulent deposits in the joints.

—A case is reported by Dr. Bennet in the 'New York Journal of Medicine,'** in which pressure was made successfully over the tumour itself. As this treatment is peculiar we give the case at length.

Thomas Elwell, aged 30, subject of popliteal aneurism, for which ligature of the femoral was advised. Hearing of the benefit of compression, he determined to try it, and commenced the treatment himself by bandaging the limb from the toes to the knee, and placing a compress of folded cloth directly upon the pulsating tumour. He persisted in this course for two or three months without the least benefit, when he determined to substitute a firmer compress.

* Prov. Med. and Surg. Journal, No. xiv, 1851.

† Lancet, July 19, 1851. § Ib., June 14.

¶ New York Journal of Medicine.

+ Ib., Oct. 29, 1851.

|| Ib., July 1851.

** Med. Times, Aug. 9, 1851.

Instead of folds of cloth, folds of *sheet-lead* formed the nucleus of his compress, which was applied in the same manner as before. The reporter called upon him occasionally to watch the progress of his treatment, and after the end of ten days from the application of the lead compress, found him suffering much pain in the knee-joint, from the severe pressure which he had made, but there was no diminution in the size of the tumour, or the force of the pulsations, the latter being readily felt through the compresses when applied with all the force which he could endure. He was advised to discontinue what was considered a hazardous proceeding, and to abbreviate his sufferings by submitting to the usual operation. Notwithstanding, being a man of very strong resolution, he determined to pursue this course still longer, and abide the issue. At this time, however, he threw aside the lead compress, and filled its place with a *ball of caoutchouc*, which he bound upon the tumour with all the force he could endure. Not long after, perhaps two or three weeks, the author called again to see him, and was much surprised upon examining the limb, (which he exhibited with no little triumph,) to find the tumour much diminished in size, and the *pulsation gone*. From this time the tumour in the popliteal space was gradually absorbed, and at the end of a few months had entirely disappeared.

—Mr. COOPER has had but little experience of the treatment of aneurism by compression, and does not appear to have met with a successful case in his own practice.*

2. *Galvano-puncture in Aneurism*.—The latest information on this mode of treatment, frequent mention of which is made in our former volumes, is from the pen of PROFESSOR SCHUH; the results of whose experiments are given in the following resumé of his interesting memoir:—

1. The coagulation of the blood is not always the immediate consequence of electro-puncture employed during from ten to twenty minutes; on the contrary, it is frequently not observable until after the lapse of many hours, or until the second day, and it increases in degree during one or two days; it is therefore manifestly due to inflammation excited by the operation. Where the coagulation takes place during the operation, it is certainly to be attributed to the chemical and also partly to the mechanical influence created by the presence of the foreign body. The more the mass of blood is kept at rest, the greater is the probability that coagulation will set in during the operation; it is, therefore, advisable to apply a bandage above and below the seat of operation. The hardness shows itself most frequently earlier at the positive than at the negative pole; if the needles are, for example, three or four inches apart, the entire intervening space does not become hardened at the same time, but the central point between the two insertions remains more or less soft. 2. Sensibility to the galvano-puncture varies in different individuals; on closing the contact all experience pain, which, however, in one patient quickly ceases, or passes into a gentle prickling sensation; while in another it continues very violent, and even occasions spasms of the limbs. The pain occasionally abates, to return again in the same degree. It was most frequently more acute at the positive pole. 3. During the galvanic action, a grayish-white, lenticular, semi-transparent vesicle very soon forms around the needle of the zinc pole; a slightly bluish one subsequently appears at the negative pole; both are surrounded by a narrow red halo, in which the elimination of gas can be seen, and even crepitation can be perceived. 4. On the following day, a brown stain is observed on the burnt cuticle in the situation of the

* Med. Times, p. 754.

vesicle, or more frequently a little scab, which falls off without suppuration in the course of two or three weeks, leaving a slight depression. On one occasion only did the formation of an eschar penetrate deeper. 5. The subsequent inflammation is indicated by the occurrence of pain. On the second day the hardness, heat, and sensibility have increased; the latter, however, is seldom very excessive. These phenomena continue for a few days only; the coagulum of blood in contact with the inner coat diminishes, and draws the walls towards the centre, causing a diminution of the caliber of the vein. 6. A single application will scarcely ever effect a cure; the electro-puncture must be frequently repeated. 7. Its employment is not free from danger; phlebitis, with secondary pyæmia, is no uncommon consequence of the operation. Moreover, it is evident, that prudence in the choice of cases is indispensable, and that its performance is not admissible except when the trunks of the superficial veins of the lower extremity are alone dilated. In aneurisms in which the application of ligature to the vessel itself is no longer possible, or would be attended with too great danger, electro-puncture appears to offer a chance of success, only when preceded by the application.

3. *Treatment of Erectile Tumours.*—A case of large nævus in the cheek of an infant, treated by subcutaneous ligature, is reported by Mr. BIRKETT.* The operation was only partially successful.

—The treatment by vaccination has been successfully carried out by M. MARJOLIN† in an instance related to the Surgical Society of Paris. The diseased congeries of vessels occupied the temple, both eyelids, cheek and lips, as well as the mucous membrane of the lips and palate. It was decided in consultation that nothing could be done to remedy so extensive a disease; but, as the patient, a little girl, had not been vaccinated, M. Marjolin made fifteen or sixteen punctures around the morbid tissues, and inserted vaccine virus. Great inflammation ensued and spread over the whole tumour. At the end of three years a great change for the better was observed. The characters of erectile tissue had almost disappeared, and in its place a firm whitish tissue was seen, somewhat less vascular than the surrounding skin.

4. *Varicocele, new treatment of.*—In a thesis with this title, M. PRUNAIRE speaks of a new mode of treating varicocele by caustic. He also enters minutely into certain anatomical considerations calculated to throw light on the pathology of the disease. In the first place he has taken the measurements of the right and left spermatic veins in fourteen cases, together with the comparative weight of the testicles on either side. In classing the subjects according to their ages, he finds that between the ages of 3 months and 2 years, there was a difference of from one to two centimetres in favour of the left spermatic vein; between the ages of 30 and 35 years the difference was from two to three centimetres. As regards the size of the testicles, the author has constantly found the left larger and heavier than the right.

A recent writer has given the absence of valves in the spermatic veins as the cause of varicocele, but this the author refuses to admit, as he concludes from the observations of St. Hilaire, as well as from his own researches, that valves are present in these veins in the majority of instances; this of course suffices to vitiate the theory arising out of their presumed absence.

The treatment adopted by M. Prunaire is thus described:—The pubes being denuded of hair, the patient is requested to walk for an hour or two; he is then chloroformed. An incision is next made over the cord, the sheath is

* Guy's Hospital Reports.

† Archives Générales.

opened with the utmost caution, and the veins scrupulously isolated from the other structures; this being done, some lint is passed underneath them to prevent the contact of the caustic with the subjacent tissues, and the veins are daubed with Vienna paste. After a few minutes the caustic is sedulously removed by washing the part in a dilute acid solution, and the wound is dressed. The veins which have been touched shrivel up, and when the eschar falls, are found to be completely obstructed.*

5. *Treatment by Mechanical Support.*—A valuable paper on the radical cure of varicocele, by means of a spring truss, appears in the 'Dublin Quarterly Journal of Medical Science.' The merit of suggesting the application of pressure to varicocele is given to the late Mr. Key; this particular instrument, the lever spring truss, was, according to the author, the invention of Dr. Thompson, of Dalkeith. Its *modus operandi* is by preventing the weight of the column of blood from above. The author of the paper from which we quote, Dr. MORRISON, was consulted by a young man, who was, as is generally the case, in a state of mental prostration, leading to thoughts of suicide. The lever truss was adjusted in the recumbent posture when the veins were empty, and the result was most favorable. The vessels diminished in size and tortuosity, and in the course of some months the patient was able to marry. The author enters candidly into the objections which have been urged against the use of trusses in this affection. Mr. Curling lays great stress on the pain which attends their use; and Professor Syme is stated to have said, that the remedy is worse than the disease. Dr. Thompson, however, scarcely mentions this pain, and in the author's case it was trifling.

It is said also, that the pressure may cause atrophy of the testes, but this objection the author disposes of by stating, that an amount of pressure likely to cause this consequence, is greater than is required for the treatment of varicocele. This danger is to be obviated by a proper adjustment of the spring leverage of the instrument. Almost all the proposals for the operative treatment of this disease, and they are many, (see 'Abstract,' Vol. II, p. 276,) are discountenanced by the highest living authorities, so that there is but little choice of remedies. The advantages of treatment by pressure are numerous; the author mentions,—avoidance of confinement and concealment of their disease; security as to life; immunity against sloughing, inflammation, and other dangers inseparable from ligature, caustics, and incisions.†

§ II.—*Injuries and Diseases of the Head and Neck.*

6. *Eyes, Injuries to, from Shot, &c.*—Sportsmen are liable to a class of injuries, of greater or less severity, which surgeons are often called upon to treat under oftentimes very unfavorable circumstances. The following observations by Mr. WHITE COOPER will therefore be read with interest:

Injuries from Shot.—Mr. Cooper notices three effects from the action of shot on the eye. If the shot be spent it will bruise the eye without penetrating, causing considerable ecchymosis, and sometimes paralysis of the retina. If the eye be struck obliquely, the shot glances off cutting a little furrow; but if struck point blank, the tunics will probably be perforated, and the shot lodged in the interior of the globe. With reference to the treatment of these cases, Mr. Cooper says, that if the shot can be seen in the anterior chamber, there can be no doubt as to the propriety of extracting it by an in-

* Gazette Médicale de Strasbourg.

† Dublin Quarterly Journal, Nov. 1851.

cision in the lower part of the cornea; but if it be hidden in the globe, all meddling is to be deprecated. Under such circumstances the room must be darkened, and absolute quiet enjoined; and the sound eye should be covered with plaster, to prevent the wounded one from opening and being moved by sympathy.

Injuries from Copper Caps.—The author has seen several instances of serious injury to the eye from this cause. The wound is generally clearly incised, heals rapidly, and for a time the patient seems in a fair way to recover; but after some period, varying from a few days to a month, acute pain in the eye comes on, with extensive chemosis, swelling of the eyelids, and haziness of the cornea. These symptoms may subside, but are sure to recur until the eye is brought into a state of chronic irritation.

To remove the fragment, the following proceeding is sanctioned by the author. The patient being placed in a convenient position, a large flap of the lower part of the cornea is to be cut, as in the operation for extraction, but it must then be snipped off with a pair of scissors. The operation being extremely painful, chloroform must be exhibited. A linseed-meal poultice is then to be applied, and the foreign body will generally be found in the poultice in a few days. Collapse of the globe is a necessary consequence of this operation.

Injuries from Thorns are common in this country. If the thorn have penetrated the sclerotic, it should, if entire, be carefully extracted. If it has been broken, the case is more difficult, and the author then makes an incision on each side, and extracts it with the forceps.

In conclusion, the author makes the following general remarks on these injuries. If a surgeon be called to an injury of the eye, the organ should be carefully cleansed from all blood and coagula, and thoroughly examined. If there be a foreign body, no time should be lost in extracting it; if not, the patient should be kept quiet in bed, subjected to the strictest antiphlogistic discipline, and carefully watched. It should never be forgotten that the integrity of the organ depends on the *prevention* of inflammation, and that this is chiefly to be accomplished by measures adopted within the first three days. The state of the lids will be the criterion of the state of the eye; so long as they remain free from tumefaction, all is going on well; but not so if a little puffiness appear at the inner angle, and gradually steal over the lid. If active measures have not been resorted to, no time should be lost in adopting them; the patient, if robust, should be bled from the arm, cupped from the mastoid process, or leeched over the temple. The cold wet rags must give place to warm fomentation, and mercury must be exhibited.*

7. *Cervical Glandular Tumours, Operations on.*—Some instances of the successful removal of enormous glandular tumours on the neck have recently been recorded.

Dr. VALENTINE MOTT has described two cases, which he prefaces with some very just remarks on the importance of anæsthetic agents. The first case was that of a little girl, æt. 10 years, the subject of a mass of glandular tumours, nearly the size of her head. The tumours occupied the cervical region from the ear to below the clavicle, pushing the trachea to the opposite side. Dr. Mott determined to remove these, which, with the aid of chloroform, he accomplished successfully.

The second case was, in all respects, similar, and also had a fortunate termination.†

— Two cases of extirpation of the parotid glands are reported by Dr. MOSES SWEAT,‡ and a third by M. MICHAUX;§ they were all successful.

* London Journal of Medicine, Nov. 1851. † New York Journal of Medicine, July 1851.

‡ New York Journal of Medicine, July 1851. § Encyclographie Médicale, Juin 1851.

— An instance of the extirpation of a voluminous bronchocele, appears among our extracts. (Art. 74.)

§ III.—*Injuries and Diseases of Bones and Joints.*

8. *Fractures, Statistics of.*—A very elaborate paper on the statistics of fractures, which have occurred during a period of twelve years in the New York Hospital, has been furnished by the late resident surgeon, Mr. LENTE. The tables comprise fractures of the thigh, leg, arm, forearm, clavicle, lower jaw, pelvis, scapula, sternum, patella, and skull, amounting in all to 1722 cases. The tables include age, sex, occupation, season, seat of fracture, &c.; the whole containing a mass of information of great utility in the history of accidents of this nature. At the end of his paper, the author mentions a new mode of keeping up extension in fracture of the femur, which is more comfortable to the patient than any other. In six cases recently treated in this manner, he mentions that though the shortening was an inch or more by measurement at the commencement of the treatment, in two there was at the end of the treatment absolutely no shortening, in all the others less than half an inch. This plan consists in the employment of broad strips of adhesive plaster, (two and a half or three inches,) which are applied to the limb previously shaved, on either side of it, from a little above the knee to below the foot, where it is secured to the ring at the end of the screw by means of a stick and cord, so that the plaster shall not be wrinkled. These two straps conjointly extend around two thirds or three fourths of the circumference of the limb, and are then confined by a single roller bandage. To prevent slipping of the plaster, the extension is not applied until some hours after the application of the former to the limb. This improvement in surgery, which is certainly one of the most valuable that has been suggested for many years, is due originally to Dr. E. Wallace, of Philadelphia.*

9. *Fracture of the Cervix Femoris.*—In a paper by Mr. HODGSON, of Chesham, four cases are given, which show that, contrary to a once prevailing opinion, bony union readily takes place if a proper position be maintained for a sufficiently long period; that the double inclined plane, for from fourteen to sixteen weeks, without restraint to the pelvis, is sufficiently long for that purpose; and that age and debility are no obstacles to bony union, though they favour absorption of the neck. He also remarks in reference to diagnosis, that it is not necessary to feel crepitus; that the shortening and excision may be very small indeed. He considers that when after a fall on the hips, an old person is from that moment perfectly disabled in that leg, there is strong presumption that the cervix femoris is broken. The fact, that a bony union is so rarely seen under the old plan of treatment is, he thinks, owing to too great precipitancy in allowing the patient to get up. This paper is illustrated by several well executed lithographic drawings.†

10. *Ununited Fracture.*—That this is comparatively a rare result of fracture, and may doubtless be attributed to the skill with which, in the present day, these accidents are treated. It will, however, sometimes happen that from peculiar circumstances connected with the patient's constitution, little or no effort is made by nature for the reparation of the injury, until the cause be obviated, whether it be syphilis or simple debility. Under any circumstances, the treatment requires to be carried out with great circumspection.

* New York Journal of Medicine, Sept. 1841.

† Guy's Hospital Reports, 1851.

To obtain bony union in these resisting cases, many proceedings are adopted, some of which have been illustrated in recent instances. Among our abstracts is a remarkable case, treated by Mr. Stanley, upon Dieffenbach's plan, which consists in driving little ivory pegs into the extremities of the separated bones. The same surgeon treated another case by sawing off the ends of the bones, with a less fortunate result, as the man died of phlebitis, with purulent deposits. The femur was the bone operated upon.*

—Three cases in which unconsolidated fracture was successfully treated by electric acupuncture occur in Dr. LENTE's Reports of the New York Hospital. The author expresses his confidence that electricity is one of the best remedial agents in such cases, and that if more attention were directed towards it, it would supersede the harsher methods adopted. Friction of the ends of the bones often, as he observes, fails, and the seton is not unfrequently a dangerous operation, as it converts a simple into a compound fracture. Electricity has no such objections; but to be efficacious it must be used conjointly with passing needles down to the fragment; the simple application of the poles to the soft parts adjacent to the fracture, appears, according to Dr. Lente, to have no efficacy.†

—Simple acupuncture without the aid of electricity has been successfully employed by M. LENOIR in a case of ununited fracture of the femur, the details of which are published in the 'Memoires de Société de Chirurgie.' (Art. 59.)‡

11. *Hysterical Affections of the Hip-Joint.*—A paper on this subject, from which we have taken one of our abstracts (Art. 41.), has been contributed by Mr. COULSON. He was consulted in the case of a young lady, of nervous temperament, on account of an affection of the right hip-joint, for which she had undergone a great deal of surgical treatment; she was bedridden and helpless, complaining of severe pain over the whole limb. The author's attention was, however, attracted to the fact, that the general health had not suffered as might have been anticipated had there been severe disease of so long duration. He ordered her steel without benefit, and she remained helpless as ever, when, on being made acquainted with family matters, which made a strong impression upon her mind, she suddenly rose from her couch and walked.

The above is a marked case of simple nervous affection of a joint, for which, as in a case also related by the author, amputation has even been performed. The symptoms are thus described by Mr. Coulson:—"In hysterical affections of the hip-joint, the patient from the first complains of pain in the part, and not in the knee, as is frequently the case when organic changes are commencing in the joint itself. The pain, which is described as most severe, is not limited to one spot, but radiates in various directions. It is remarked that though unable to move the limb without agony, if the attention be distracted, and during sleep, the patient will move it without complaint. The more, in fact, the patient's attention is directed to the part, the more she seems to suffer. In real disease of the joint, the disturbance of rest is one of the most distressing symptoms. In hysterical affections, on the contrary, the sleep is calm and refreshing.

In general, there is no visible alteration about the limb or joint; but sometimes there is a general puffiness of the whole hip. This is, however, in Mr. Coulson's experience, seldom considerable, and is analogous to the œdema which sometimes attends neuralgia in other regions.

* Medical Times, Jan. 4, 1851. † Amer. Journal of the Medical Sciences, April 1851.

‡ Avril 1851.

In all cases there is a tendency to muscular contraction; the thigh is bent on the pelvis, and the leg on the thigh, and this alone becomes a troublesome symptom. The muscles also undergo a kind of atrophy, and the tendons contract cellular adhesions. The author has known this to occur to such a degree as to require tenotomy.

The pathology, as stated in a former page, is doubtful: the treatment unsatisfactory.*

12. *Dislocations of the Humerus*.—An investigation of the pathology of dislocations of the humerus, by Professor GUNTHER, of Leipsic, has led him to the following generalisations:—1. In all complete luxations the capsule is torn to a great extent, commonly to one half; so that a narrowness of its aperture, with few exceptions, is not a cause of difficult reduction in recent dislocations. 2. In all recently examined cases (even in *L. dorsalis*) the anterior part of the capsule has been the part found torn. 3. In all but one case some of the muscles have been found torn, and especially the subscapularis. 4. The large tuberosity is often in part or wholly torn off, and sometimes the glenoid cavity is broken; both circumstances inducing crepitation, and the latter rendering support necessary to prevent a redispacement of the reduced bone. 5. The commonly termed *luxation into the axilla* may also be termed *subcoracoid*, which need not, therefore, be considered as a separate species. 6. Whether the head lies externally or internally to the subscapularis can only be determined during life, when it is far removed from the scapula towards the clavicle. The *L. subpectoralis* of Velpeau may sometimes appear as *axillary*, sometimes as *subclavicular*. 7. The head having passed through the rent in the capsule, proceeds straight on, and remains where it is dislocated to, unless new external causes act upon it, so that the idea of secondary dislocation must be rejected. 8. This observation applies also to *L. subclavicularis*, which is apparently always primary, but only producible by great force, the rupture of the supraspinatus, and fracture of the tuberosity, and is always very difficult to replace. 9. Incomplete dislocation may occur for a short period, but it is very improbable that it should so continue for long. The diagnosis during life is very uncertain, and the preparations intended to demonstrate it exhibit, by reason of the absorption of bone, appearances very similar to those of complete dislocation. 10. The bones that are brought into abnormal contact after luxation, in consequence of their partial absorption, the deposition of osteophytic masses, and the formation of new ligamentary apparatus, form a kind of new joint, which fulfils tolerably well the functions of the normal one. 11. The attempt to reduce a dislocation that has continued for more than three weeks is highly dangerous, with the exception, perhaps, of the *L. dorsalis*, and, if it can be certainly made out, the *L. subscapularis*.

In the *classification* of these dislocations, Professor Gunther observes, that authors have followed different principles, and have confounded these with each other. The older surgeons and Desault fixed upon the direction which the head takes, and distinguish dislocations forwards, backwards, and outwards. Later they were called, as by Boyer, Cooper, &c., after the bones with which the head came into contact, or the vicinity of, as ascertained by experiment and post-mortem examination, whence the names subclavicular, subscapular, &c. Still later they were named, as by Sedillot, Velpeau, &c., according to the relations the dislocated bone bore to the muscles,—as *luxatio subpectoralis*, &c. The requisites for the classification of dislocations in general, and of the humerus in particular, are—1. They must agree with experience, and no

* London Journal of Medicine, July 1851.

species can be otherwise than hypothetically received that has not been confirmed by dissection. 2. Determinate principles must be observed, so that one and the same luxation be not referred to two different species. 3. Those species can only be received that can be recognised and distinguished during life. 4. The classification must be such as to admit of definite rules of treatment being laid down. The following are the chief forms of humeral dislocation. 1. On to the *dorsum scapulæ*. Of this only one dissection has been made, but this, as well as twenty-nine cases observed in the living, render the dislocation indubitable. 2. On to the *lower border of the scapula*. The dislocation directly under the scapula can only occur if the long head of the triceps is pushed back or torn, and only one case of it has been demonstrated by dissection. Formerly this dislocation was believed common, but all recent observations show the contrary, and that in the so-called axillary the head is thrown more towards the anterior edge of the scapula. 3. On to the *anterior border* of the scapula, either upwards or downwards, and in immediate contact with the scapula, or separated from it by the subscapularis. This is the most frequent form, and of which several modifications exist; but as they are not essential they do not form grounds for classification. In the commonest, the head is directed to the anterior and under border of the scapula, constituting the *axillary* dislocation. More seldom it may be found placed higher, or in contact with the coracoid process. In both these forms the head may be placed either between the scapula and subscapularis muscle, or between the latter and the thorax, and may thus raise the pectoralis more or less forwards. It has, therefore, received the various names of partially downwards, axillary, subcoracoid, subscapular, subpectoral, and intercostal. In most cases the head is placed between the scapula and subscapularis, whereby this is always torn; but the head seldom passes through it so as to become placed under the pectoralis minor. 4. *Under the clavicle*, or towards it, and consequently removed from the scapula. This luxation, termed subpectoral by Velpeau, subclavicular by Sedillot, intra-coracoid by Goyrand, and luxation forwards and upwards by Desault, can only happen if the head has penetrated the supraspinatus, or if the connection with the tuberosity is separated. As this form is rectified with difficulty it is commonly found in very old dislocations.*

13. *Diseased Joints—Treatment by Free Incisions.*—Mr. GAY has attempted, in our opinion, a very salutary reform in the method of treating diseased joints, in a valuable paper read before the Medical Society, an abstract of which appears in the weekly medical journals.

Mr. Gay commenced his paper by observing, that to the present time there was no department of surgery in which the powers of art have been comparatively so feeble as when applied to the relief of those diseases of the joints, which, from their results, might be termed destructive. Hence, let the articular surfaces of the joint be bereft of their cartilages, a sinus or two be formed around it, and the health of the patient show symptoms of exhaustion, and the joint, and probably the whole limb, is doomed to amputation. He adverted to the causes of the removal of the cartilage from joints, and gave it as his opinion, that in addition to primary synovial and osseous disease, the cartilages were sometimes removed by absorption, in consequence of degeneration of their own tissue, without any traceable affection of the contiguous textures. In all cases of removal of cartilage the tissue degenerates into a kind of fibrous texture, antecedent to the final process; and as portions of cartilage were sometimes observed to be removed without any apparent disorder of either the synovial or osseous surfaces, and, moreover, as cartilage

* Schmidt's Jahresbuch.

was known to be inadequate to its own repair, Mr. Gay thinks it most probable that the portions of cartilage so removed had first spontaneously degenerated, and then become absorbed. Mr. Gay went on to remark, that if a series of joints be examined in which the removal of the cartilages is taking place, the appearance will be as follows:—If it be presumed to follow disease of the synovial capsule, the cartilage will be found in some to maintain its connection with the bone, whilst it is thinned by absorption at its free surface. In others, however, the bone is found inflamed at various points of its connection with the cartilage; and at these points the cartilage is loose, and may be peeled off, so that portions of thin attached and unattached cartilages are found in the same joint. When entirely denuded, or almost so, the surfaces of the bones may exhibit simply a state of increased vascularity, which precedes the effusion of plastic lymph for the purposes of reparation by ankylosis, or may be observed to be in a condition of ulceration. This ulceration may exist as a simple abrasion, or be of considerable depth; but there is generally an uniformity in this respect over the whole surface. With this state of ulceration there is also a softening of the osseous structure, and frequently disintegration; the contents of the joint consisting of broken-up cartilage and osseous and other debris together, or osseous matter, with ichorous or sanious discharge. When the disease originates in the bone, as in by far the greater number of cases, in Mr. Gay's opinion, it does, the separation of the cartilage is effected by another process, which he terms, "shedding," and the cartilage is then reduced to the condition of a foreign body within the joint. Shreds of cartilage thus situated in a joint may be observed after months and even years of disease; and as, on the other hand, its separation from the articular extremity of the bones may be accomplished in an almost incredibly short period of time, it is fair to infer that the time thus passed must have been occupied in the process of its extrusion from the joint, and that this is accomplished, neither by ulceration nor absorption, but disintegration by, and solution in, the discharges of the joint. But the bone itself being diseased, adds its exfoliated or disintegrated particles to the cartilaginous debris, which, with its own discharges, constitute generally the contents of a joint in which the disease commenced in its bony elements. The result of these discharges is to set up inflammation in the sound textures contiguous to the joint, and general systemic irritation. Sinuses form around the joint; the disease extends itself; the ligaments become ulcerated; the spongy tissue of the bones infiltrated with pus, and broken down; osteophytes form around the heads of the bones; abscesses extend themselves into the surrounding soft parts, separating the different structures, and setting up unhealthy and destructive action amongst them; and, in short, a climax is arrived at in which the local mischief reacts upon the constitution, and life is only to be preserved at the sacrifice of the joint or of the limb. Mr. Gay inferred from these remarks, of which only an imperfect abstract has been given,—

1. That there appears to be no reason why diseases affecting the constituents of a joint should be slower in their course of reparation than diseases of any other part or structure.

2. That the removal of cartilage from its osseous connection in a joint, is occasionally effected by absorption, but most frequently by a process of "shedding," or exfoliation.

3. That cartilages thus shed become, by their being pent up in a joint, sources of local and constitutional irritation, and thus promote disease in the osseous and other structure appertaining to a joint, supposing that such affections do not exist primarily; and in case they do, these cartilages, by the same influence, maintain and extend these diseases also.

4. That the natural outlets for these discharges, the sinuses, are inadequate for that purpose.

5. That therefore the exfoliated contents of a diseased joint have to be minutely broken up by, or dissolved in, the discharges of the joint, in order to their removal; processes which are necessarily of a very protracted order, and which account for the tardiness in general characteristic of joint diseases.

6. That the exfoliated contents of a joint, after its cartilages have been removed, and even after extensive disease has been set up in the bones and other textures, have only to be completely removed, and processes of reparation will, in the majority of instances, immediately commence.

Mr. Gay then alluded to the usual modes of treatment, and remarked, that the operation of resection of a joint is not only a useless but an unphilosophical mode of treatment for diseased joints. In the first place, primary disease is generally limited to one of the articular extremities of the joint; it is therefore a useless mutilation to remove more than that disease, supposing the operation were for a moment admissible. But, moreover, dissections show that disease originating in bone, when arrived at that stage at which the operation of resection is generally employed, has extended itself far beneath the surface, and frequently along the shaft for a third of its whole length, so that resection cannot accomplish its purpose, which must be manifestly the removal of all disease. The plan Mr. Gay recommends, then, is free and deep incisions made along each side of a joint, so as to lay open its cavity freely, and to allow of no discharges being by any possibility retained within its cavity. They should be made of such a length, and so treated, that they do not heal into the form of sinuses. They should be made, if possible, one on either side of the joint, and in the direction of the long axis of the limb. They should extend into the abscesses in the soft parts so as to lay them open. If sinuses exist, the incisions should be carried through them, if this can be done without departing from a slight curve. If either of the bones be carious, or necrosed, the incisions should be carried deeply into such bones, so as to allow the dead particles of bone to escape. Ligaments which stand in the way of a free discharge from the joint should be cut through. Of course important vessels should be avoided. The wounds should be kept open by pledgets of lint, and free suppuration encouraged. The constitutional powers have in each case rallied immediately after the operation; and as the discharges from the joint have altered in character and become healthy, which they in general do in the course of two or three weeks, these become invigorated, and improve with the improving joint. Mr. Gay then narrated some cases in corroboration of his views:—Peter D—, æt. 38, admitted into the Royal Free Hospital in 1842 for diseased elbow-joint of three years' standing, with ulceration of the cartilages and sinuses. The joint was opened on either side, and healed in eleven weeks. The next was a case of disease in the articulation between the first and second phalanges of the thumb, of eighteen months' standing. Cured in six weeks. The third case was that of a man with "long standing" disease of the tarsal articulation. One sinus led to the interior of the joint. Incisions were made on each side of the foot, and complete ankylosis followed. The fourth case was that of a little boy with strumous constitution, with disease of the knee-joint consequent upon suppuration of the bursa behind that joint. The little fellow was reduced by fever to a very low ebb, so that bed-sores formed on parts of his body. The joint was opened; ankylosis took place at the end of four months, and the knee bent on the thigh. The fifth case was that of a German, with disease of the wrist-joint, which had resisted treatment. One sinus led into it. One incision was made at the back of the joint, and ankylosis followed, but was

not observed to be perfect for six months. The sixth case was that of a young Irishwoman, with disease of the tarsal articulation, following upon traumatic erysipelas of the leg and foot. She was reduced to an exceedingly low condition, and from cough with bloody sputa, night sweats, (according to Dr. Heale,) the physical symptoms of the chest, and extreme emaciation she was supposed to be phthisical, and so diseased, that amputation, which was supposed to be the only remedy for the disease, as far as the joint was concerned, was forbidden by the authority of Dr. Heale. Mr. Gay made an incision on either side of the foot in this case, and the change both in the joint and constitution was remarkable. Her health rallied from that moment, and the joint assumed a more healthy aspect. In a fortnight the joint was fixed by the exudation of lymph between the bony surfaces, and in five weeks perfect ankylosis had taken place, and the wounds had healed. She soon after left the hospital, and was a week or two since, to Mr. Gay's knowledge, in perfect health. The seventh case was that of Highley, a report of which has been published; and the eighth was one of deceased digital phalanx, which was not successful, as the necrosed bone eventually came away.*

— The good results of, as well as the sound pathology on which the above treatment is based, are confirmed by Mr. HENRY SMITH, who bears testimony to its utility in cases witnessed by himself.†

14. *Treatment of Fungosities of the Synovial Membrane.*—The same principles of treatment as are advocated by Mr. Gay, were adopted by M. LANGIER, and described in July last in the '*Union Médicale*.' His treatment consists in plunging a lancet into the joints affected with white swelling, the immediate effects of which is an abundant hæmorrhage from each puncture. He gives two cases, but in both the relief was only partial.

15. *Articular Cartilages, their diseases.*—Mr. REDFERN, whose researches on the healthy and morbid nutrition of these structures are well-known, has recently published a paper,‡ a reprint of which is now before us, on the mode of healing of wounds in articular cartilages, and on the analogy which exists between diseases of this tissue and inflammation and ulceration of other textures. With reference to the latter portion of this paper with which we have immediate concern, we may state that Mr. Redfern examines the nature of the process by which portions of articular cartilage are removed during ulceration or erosion, with a view to ascertain whether it is in any respect similar to processes which occur in other textures, and especially to ulceration. On this point he makes the following remarks:

"I think it will be sufficiently evident, that the essential parts of the process of removal of articular cartilages (ulceration) are, — *the softening of the intercellular substance, and the release of the cells, very often attended with the escape of their contents by the destruction of the cell-walls*, all the parts of the tissue being thus ejected on the ulcerating surface: whilst the cure consists in the transformation of the intercellular substance, and of the nuclei of the cells of the adjacent cartilage, respectively into the white and yellow tissue of the fibrous cicatrix. In different instances, the cells enlarge in very various degrees before they open, and their contents are,—1st, one, two, or more ordinary nuclei; 2d, the ordinary nuclei with the addition of bright, highly refractive granules, oil globules, or molecular matter; or, 3d, irregularly rounded corpuscles, from six or eight to sixty or more in number; whilst the intercellular substance softens into a gelatinous and finely molecular mass,

* Reported in Medical Gazette, Nov. 28, 1851. † Medical Times, Nov. 29.

‡ Edinburgh Monthly Journal, Sept. 1851.

which gradually disappears by its particles falling off on the surface ; or, 2d, it is converted into an imperfectly fibrillated mass, destined shortly to become disintegrated ; or, 3d, it is resolved into a more perfect fibrous tissue, which is to form part of the cicatrix.

“Ulceration in other tissues consists in the gradual detachment and ejection of dead pieces of their substance visible to the naked eye (sloughs),—in the falling away of changed portions of texture, so small as only to be recognised by the microscope, as in caries,—or in the discharge of a multitude of granules or molecules into which the part has degenerated. Being generally accompanied by inflammation in tissues furnished with blood-vessels, part of the inflammatory exudation, consisting of blastema, granules, and cells, is thrown off, together with the disintegrated elements of the part, and these constitute together a very evident discharge. The cure consists in the conversion of the nucleated cells of the inflammatory exudation into the white and yellow fibrous tissue of the cicatrix, the cells splitting to form the white, and the nuclei elongated to form the yellow fibres.

“The process of ulceration in cartilage, and other tissues, is, therefore, precisely the same if we regard merely the actions of the essential elements of the textures ;—in both, softening and disintegration occur, with ejection of the molecular or granular matter into which the part has been reduced ; in both, small particles of the tissue are thrown off, and are capable of recognition by the microscope ; in both, larger portions of the texture, visible to the naked eye, are at times detached, in the one case, in the form of sloughs of dead tissue, in the other, in that of large portions of much less changed cartilage ; lastly, in both instances, the process may go on with extreme rapidity, or it may make scarcely perceptible progress for a very considerable period.

“The points of dissimilarity are these,—articular cartilage contains no blood-vessels, consequently ulceration and other changes of structure confined to it are never complicated by inflammatory exudations, pus, &c., and can be examined very satisfactorily ; ulceration in tissues containing blood-vessels is almost always complicated with inflammation, and the ejected particles of the tissues having undergone a very complete degeneration, and become mixed with a mass of structures formed in the inflammatory exudation, also degenerate, are, therefore, very difficult to recognise. Ulceration or other disease confined to articular cartilage, has in no single instance been shown to be productive of pain,—no doubt for the very simple reason, that these structures contain no nerves ; in other textures, ulceration is often attended with very severe pain from implication of the nerves ramified in their substance.

“The *healing of ulcers* in articular cartilages, and in tissues freely supplied with blood-vessels, differs in this remarkable particular, that in the former the fibrous cicatrix is invariably made up of the changed substance of a portion of the cartilage not subjected to the process of ejection, and in the latter, the cicatrix as constantly results from the development of the inflammatory exudation. This difference admits of the following explanation : in the case of the ulcer affecting no texture but that of cartilage, there is no other matter from which a cicatrix can be produced than the actual cartilage tissue remaining ; and it may be remarked, that cartilage is a very simple cellular texture, and that the greater number of the tissues are originally formed from cells,—that the cells of cartilage have a natural tendency to transformation into fibre, as is shown in the development of fibro-cartilage,—and that the intercellular substance shows as remarkable a disposition to produce the same result in its diseased state. In the ulceration of tissues supplied freely with blood-vessels the reverse maintains ; for the degeneration and destruction of the tissue actually involved is so complete, that this can in no way assist in the forma-

tion of the cicatrix; and there is, therefore, nothing left in this instance but the inflammatory exudation from which that substance can be formed.

"Inflammation.—In now directing attention to the process of inflammation, to ascertain how the diseases of cartilage stand in relation to it, it is, in the first place, absolutely necessary to state what is meant by inflammation,—for, though we may not be able to frame a definition of it which will be universally acceptable, and which will exclude tubercular, cancerous, and other morbid growths, every man is bound, in the use of a particular term, to intimate what he means by it, if it be one which has no general acceptance.

"What is to be understood here by the term inflammation, is '*a peculiar perversion of nutrition or of secretion,*' attended with certain changes in the blood and blood-vessels, and including exudation as its most important and characteristic phenomenon. This definition indicates sufficiently well for our present purpose the nature of the process understood in ordinary professional language and in practice as inflammation, but it does not separate cancerous and tubercular exudations, &c., from those which take place in ordinary inflammation in healthy persons; nor is this to be expected,—for, as there is scarcely any healthy structure, in man or other organised beings, which is capable of being separated from all the rest by definite lines of demarcation, it is not to be expected that diseased structures and the phenomena which occur in them will be capable of subjection to strict limitation and definition. As it is clear, however, that inflammation, and every process which is at all allied to it, are strictly processes of abnormal nutrition, it is necessary to inquire, What are the essential conditions of nutrition in general?

"Healthy nutrition requires a supply,—1st, of material of a certain definite amount and quality; and, 2d, of vital force competent to convert this into tissue.

"Hypertrophy consists in an increase in the amount of material and of organising force.

"Atrophy results from a deficiency in the amount of material, or of both material and vital force.

"Abnormal nutrition is produced by various alterations in the quality of the material supplied, and in the nature and action of the organic force,—conditions which are generally, but perhaps not necessarily, associated.

"Now, for the establishment and continuance of these processes, it is not of the least importance whether,—1st, the nutritive material be supplied directly from without, as in the lowest animals and plants, or be carried to particular parts by means of a circulating system; for, in either case, when material is supplied of a certain definite quantity and quality, the first condition is fulfilled; nor, 2d, does it matter whether the vital or organic force belong directly to a particular tissue, constituting its only distinction from dead matter, or be communicated to it, or controlled in its action by a special nervous system; if the force exist, it is enough for the second condition.

"When, therefore, we are engaged in the examination of the healthy or diseased states of the lowest tribes or tissues of organised beings, we have nothing to attend to but the structure and mode of action of the part itself; but when we take up a part which contains living vessels and nerves, as well as its own proper texture, the examination becomes a very complicated one, and requires a thorough investigation of the nature of the changes in structure and action of every part of which the compound body is composed."

The author thinks that the demonstration has been fully made, that every morbid action which takes place in the structure of cartilage is referable to an abnormal nutrition of its texture, and, in so far, all these morbid actions resemble inflammation; they differ from it,—1st, in not being attended with

exudation, because the texture in which they occur contains no blood-vessels; and, 2d, in not giving rise to pain on account of the absence of nerves.

If, therefore, inflammation be *merely* a process of anormal nutrition, it takes place in cartilaginous as well as in other textures; but if we include *exudation* as an essential phenomenon of inflammation, it never affects the human articular cartilages, which contain no blood-vessels, and present no exudation in disease.

So with ulceration,—if we are to separate the softening, degeneration and ejection of tissue in the formation of an ulcer from the exudation, which is an almost constant attendant on this process in vascular tissues, and forms cicatrices in them, then ulceration in cartilage and in other tissues is identical though the method by which ulcers heal in the two forms of texture is altogether different; if, on the other hand, we include in the term ulceration the production of exudation and its transformation into the tissue of the cicatrix, then it is equally clear that ulceration in cartilage and in vascular tissues differs in the occurrence of those phenomena in the latter case and not in the former.

Finally, the author calls attention to the following conclusions:—

“1st. Wounds in articular cartilages heal perfectly by the formation of fibrous tissue out of the cut surfaces.

“2d. The fibrous cicatrix consists of white and yellow fibres, which are formed out of the inter-cellular substance of the cartilage, and out of the nuclei of its cells respectively.

“3d. Articular cartilages disappear after amputation at the joints, either by being transformed into fibrous tissue, which is mixed with that of the cicatrix,—or by slow ejection of their particles into a newly completed synovial sac.

“4th. Ulceration in articular cartilages differs from that in other tissues, in neither being accompanied by exudation, nor attended with pain,—differences which depend on the absence of vessels and nerves.

“5th. Ulcers in articular cartilages heal by transformation of the surrounding cartilage tissue into fibre, but those occurring in other textures are cured by the formation of a cicatrix out of newly exuded blood plasma.

“6th. Inflammation, regarded as a process of anormal nutrition, attended with changes in the blood and blood-vessels, including exudation as an essential phenomenon, does not occur in articular cartilages in man, simply because these textures contain no blood-vessels.

“7th. The whole diseased states of cartilage are referable to a changed or anormal nutrition of the texture, and to this alone; when unaccompanied by disease in other textures, they produce no pain or other symptoms by which they can be recognised, and have much less surgical importance than they have for many years been supposed to possess.”

16. *Bursæ Mucosæ*.—The anatomy and pathology of the deep bursæ mucosæ, or those which are interposed where tendons are exposed to friction, are attentively considered by Mr. COULSON. He first gives their anatomical arrangement, enumerating their different positions and attachments, after which he enters upon their pathological conditions. He observes that, when inflammation occurs in these structures, the clear albuminous fluid which they secrete undergoes various modifications. At first the fluid becomes thinner and more sparing than natural, and when examined a crackling sensation is found in the part. If the bursa be deep-seated considerable pain is caused, and may give rise to some obscurity in diagnosis. There are sometimes found, especially in the synovial thecæ of the flexor tendons of the wrist, numerous

hard fibro-cartilaginous bodies, like millet seeds. These have been called hydatids, but are, the author observes, growths from the vascular fringe of the membrane, which though pedunculated in the first instance, eventually float loose in the cavity.

The most frequent situation of these enlargements is the synovial sheath which invests the flexor tendons of the fingers and extends under the annular ligament of the wrist. When distended by fluid, it produces a considerable elevation, which is often constricted and divided into two parts by the annular ligament of the wrist. The walls, when laid open, are found to be thicker than natural; the lining membrane is rough; the fluid contained within is opaque, yellow, or yellowish-brown, and thick, and it frequently contains those small bodies above-mentioned, which are smooth externally, and often hollow; some, however, are solid, of fibro-cartilaginous structure, and resemble grains of rice in general appearance. The cyst, when minutely examined, is generally found thickened and of fibrous structure; externally it is connected to the parts around by loose areolar tissue. Internally it presents a velvety or roughened appearance, and there proceed from it numerous fringes, of which some are pedunculated. Embedded in these fringes are sometimes those hard white bodies, which are frequently found free in the sac; some of them are elongated and seed-shaped, others flattened and triangular, or round. The smaller are generally solid; the larger contain a cavity. These bodies were described by Dupuytren as hydatids; and the term "hydatiform" has been applied to the bursal swellings about the wrist, under the idea that such parasites were the cause of the enlargement of the sac, and of the collection of fluid. Deviations, both in the quantity and in the consistence of the synovial secretion, may produce a peculiar condition of these fibro-serous canals, which yield upon pressure a crepitating or crackling sensation. This sound may be heard in whatever region of the body fibro-serous grooves naturally exist. It is commonly heard in the region of the shoulder-joint, where it is connected with a morbid condition of the sheath of the long tendon of the biceps flexor cubiti. The same sound has been heard about the tendons of the hamstring, and behind the internal malleolus in the sheaths of the flexor muscles of the foot; behind the external malleolus along the course of the tendons of the peronei muscles and those upon the instep, and in other parts.

Although violence is often assigned as the cause of this affection, its origin, in the greater number of cases, is obscure. The author thinks that it is more likely to depend upon the influence of some constantly acting source of irritation than on any sudden injury, and that the symptoms which usher it in support this view. At times, there is at the commencement acute pain, which, however, gradually subsides when the part is at rest, and is excited only upon movement. But more commonly there is little or no pain felt by the patient, until he makes a greater effort than usual, when the attention is for the first time directed to the part. Upon awaking in the morning, the part is stiff, but the stiffness goes off after a little exercise. There is rarely either heat or redness; the latter is generally secondary, and referable to accidental rubbing and friction. There is always some amount of swelling, the form of which depends upon the natural connections of the part affected. If the disease occur in the sheath of the extensores ossis metacarpi and primi internodii pollicis, the tumour extends obliquely across the lower part of the forearm, from the ulnar to the radial side. If it affects the radial extensors, the swelling, wider below than above, passes over the inferior and outer part of the broad extremity of the radius. In severe cases, the stiffness of the limb, the sensation of weakness, and the pain upon movement, are so con-

siderable, that a man is unable to follow his employment; and, in the higher ranks of society, accomplishments, such as instrumental music, which require great freedom of movement, have to be suspended, or, indeed, entirely given up.

The manner in which these tumours show themselves, is as obscure as their etiology. Sometimes a peculiar creeping sensation is experienced down the fingers, wrist, and forearm; at other times there is stiffness, weakness, and difficulty of movement. In other cases, it is the tumour which first attracts the patient's attention; and the symptoms above related are felt only at intervals, and after any greater exertion than usual. The shape of the swelling, as it affects the large bursæ mucosæ surrounding the flexor tendons of the fingers, is variable; sometimes it commences in the palm of the hand, at other times in the lower part of the forearm; and in both instances it soon becomes bound down by the annular ligament. Indolent and painless upon pressure; fluctuating, and presenting irregular projections, it appears as a bilobed mass, upon which the fingers have an involuntary tendency to close. If the contents be steadily and forcibly squeezed downwards towards the hand, a movement may be communicated to the fingers, along whose thecæ the fluid is pushed. And during this examination, when the fluid is pressed backwards and forwards from one end to the other of the enlarged sac, a peculiar *frottement* is felt, upon which Dupuytren laid great stress as a diagnostic symptom.

The pain and sensation of weakness produced by such a tumour is so great, that the limb soon becomes useless; the fingers are permanently bent, and any attempt to extend them excites a dragging sensation along the entire cyst.

The diagnosis of these tumours is not easy, but, in the author's opinion, a satisfactory decision may be arrived at by the fact of fluctuation, or if that is absent, by the crepitation before alluded to. Important aid is also rendered by a consideration of the anatomical connections of the bursal tumour.

As regards *treatment*, the author states, that it is customary, in the chronic cases, to employ counter-irritants, such as blisters, irritating ointments, &c. The emplastrum ammoniaci cum hydrargyro, spread upon leather, may be applied to the limb, and secured by a firm bandage; the whole to be worn for several weeks. If the fingers are stiff, friction of the limb and passive motion may be resorted to, when the swelling has in great measure disappeared, and the fluid is nearly absorbed. The arm may be soaked and rubbed in a warm arm-bath daily. When the limb is immersed in a heated fluid, much greater force may be used with impunity, than under the ordinary circumstances.

The operations which have been recommended for the cure of these synovial tumours are the following:—Extirpation; incision, either simple or combined with irritation of the surface of the cyst; subcutaneous puncture; and iodine injections.

As regards extirpation, it is extremely difficult, on account of the extent of the connections of the sac.

The author generally makes an incision longitudinally through the most prominent part of the swelling, and evacuates the contents. Some amount of inflammation usually supervenes; and the cavity becomes obliterated in the usual manner. But there is a risk of the inflammation proving very severe, and extending along the muscles of the forearm, attended with a high degree of fever and constitutional disturbance. Death has ensued from such an attack; and in other cases, in which the inflammation has been subdued by active treatment, the mobility of the fingers has been permanently impaired.

In mentioning other modes of treatment the author alludes to Gerdy's plan of subcutaneous incision, but does not approve of it.

§ IV.—*Injuries and Diseases of the Genito-Urinary System.*

17. *Varicose Lymphatics of the Prepuce.*—M. BEAU, of the Hospital Saint-Antoine, describes the above-named affection as situated under the mucous membrane on the internal and lateral aspect of the prepuce, in the lateral folds of which it is hence concealed. To see it, it is necessary to render tense the integument of the penis; it then appears under the form of a small round cord, quite transparent, from one to three millimètres in diameter, and one or two centimètres in length. This cord is resistant and hard; it cannot be compressed, nor can the transparent liquid which it contains be squeezed out. Its *dorsal* extremity is situated near the median line of the dorsum of the penis, and terminates insensibly under the skin, so that it can scarcely be felt. The *frenal* extremity is near the frænum præputii, and ends abruptly in the mucous membrane; but it is not easy to perceive the lymphatic vessel, which is a continuation of the dilated portion. When the cord is pretty long, it presents a sort of intersection, probably denoting the presence of a valve; for, when it is pricked, only that portion on one side of the valve is emptied. The fluid is perfectly limpid: it reappears two or three days after the vessel has been emptied by puncture. The lymphatic varix first appears suddenly, after excessive irritation of the prepuce, as in coitus. It then disappears in a day or two; but returns on a renewal of the cause, and soon again disappears. It at length becomes permanent, and the cord is as large as a pigeon's quill. The affection does not produce any serious consequences.

The treatment varies, according as to whether the disease is intermittent or continuous. In the first case, it will be removed by astringent or tonic lotions. If it is continuous, a needle, armed with a thread, must be introduced into the frenal extremity, and brought out about a centimètre beyond. The pain produced is very slight. In three or four hours the thread may be removed, sufficient inflammation having been produced. The cord is then swollen, somewhat tender, and opaque. It gradually decreases; and disappears in two or three months. If the thread be introduced at the dorsal extremity, the frenal end still remains dilated, and the operation has to be performed over again.*

18. *Stricture of the Urethra*—Mr. WAKLEY'S *Instruments*.—By some oversight the mention of these instruments was omitted in our last Report, an omission we now proceed to remedy.

The instruments in question, of which we append an illustration, consist of the following parts:

Fig. 1, (a.) The catheter complete, thirteen inches long.

(b.) The thumb-slide separate, which screws closely upon the catheter, to which it acts as a handle. Its use in guiding the point of the catheter is evident. It is removed when the index rod is screwed on.

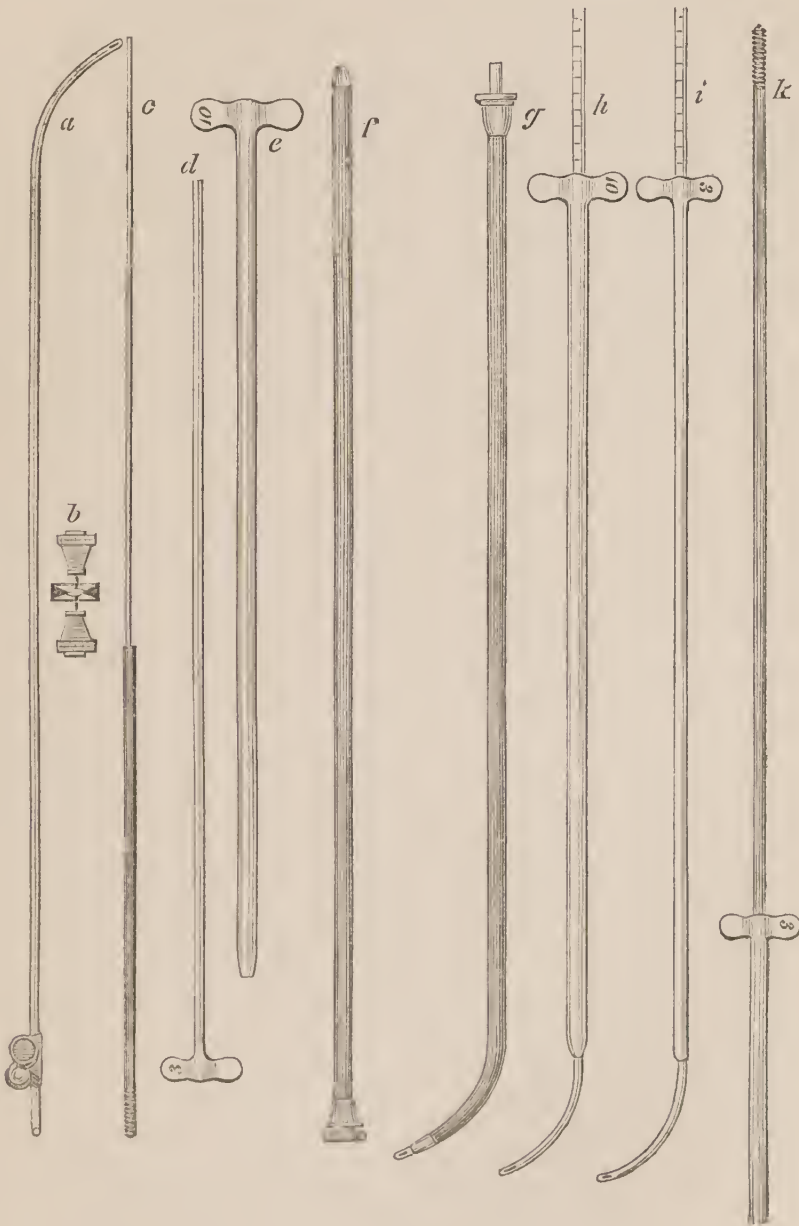
(c.) A steel rod, which passes into the catheter as far as the screw, at which point both are united by two or three turns of the rod. By the attachment of the rod an addition of five inches is made to the catheter, the rod and catheter combined form the index-rod for the silver or elastic tubes.

* Revue Médico-Chir. de Paris, January 1851, as quoted in 'Archives Générales de Médecine,' May 1851.

(*d* and *e*) are two silver straight tubes, of which there are eight of graduated sizes: the first is only one size larger than the index-rod, and the others regularly increase in circumference, corresponding with the numbers of the ordinary bougie. These tubes are nine inches long, are of a conical shape at their distal extremities, and are so constructed as to fit, with extreme exact-

No. 1.

No. 2.



ness, the surface of the index-rod. They slide with the most perfect ease along that guide, and being directed by it if the catheter be through the stricture, the tubes cannot take a wrong course or make a false passage, but must pass along the index-rod.

(*f.*) An *elastic tube*, composed of a flexible metal, covered with elastic gum fabric. This combination gives to the instrument very considerable strength, without rendering it clumsy or bulky. The extremity of each of these flexible tubes has the same form as that of the silver tubes, and fits with perfect accuracy the surface of the index-rod. There are sizes of the elastic tubes corresponding with those of the silver tubes.

Fig. 2, (*g.*) is an elastic metallic tube, running upon the directing catheter, and taking its curve.

(*h* and *i.*) are tubes shown as they slide upon the directing rod.

(*k.*) is the upper part of *h* and *i*, viz., the steel rod screwed into the catheter (*a*), with the silver tube (*d*) running over it.

The mode of using this instrument is thus described :

“The catheter is to be gently introduced through the contracted urethra into the bladder. The stilet should then be withdrawn, and the operator being assured, by the escape of urine, that the instrument is in the bladder, must then insert the smaller end of the steel rod into the catheter, and having secured it by making two or three turns of the screw, remove the thumb slide, and then pass No. 3 silver tube upon the index-rod right through the stricture. This tube being withdrawn, the others may be all passed in a similar manner. After the last metallic tube has been withdrawn, the command gained over the urethra is to be preserved by passing one of the elastic tubes over the index-rod. The flexible tube being in the bladder, the index-rod is to be withdrawn through it. The tube may be left in the bladder, if required.”

19. *Treatment of Stricture by Potassa Fusa.*—In a pamphlet reprinted from the ‘Medical Times,’ Mr. WADE strongly advocates the advantages of the potassa fusa in stricture, as first brought into notice by Mr. Whateley. Mr. Wade’s observations on the subject are to the following effect :

“I am convinced, (he remarks,) that the excellent effects of this caustic in the cure of stricture are but little known to the generality of surgeons. It was in impermeable strictures that I first had recourse to caustic potass, and very soon became convinced of its superiority to nitrate of silver in such cases. I found that to be effective in old, hard strictures, it was necessary to employ it much more freely than was recommended by Whately, and that this might be done with perfect safety. The caustic potass may be advantageously applied to strictures for two purposes; one to allay irritation; the other to destroy the thickened tissue which forms the obstruction. When used in the minute quantity employed by Mr. Whately, I believe its action to be simply that of allaying irritation, as, when mixed with lard and oil, combined with the mucus of the urethra, it can scarcely have any effect beyond a mild solution of caustic, which most probably causes a more healthy state of the lining membrane of the stricture. To insure the action of the potass, instead of being below the level of the hole of the bougie, it should be fairly exposed, having its points slightly projecting. The bougie should be marked as directed by Mr. Whately; and if the points of the caustic be covered with lard, there need be no fear of its acting before it reaches the stricture. When used in small quantity, of the size of a common pin’s head (and less is seldom of any use), unless a stricture be very irritable, its application usually causes nothing more than a slight sensation of heat, scarcely amounting to pain. The bougie should be gently pressed against the stricture for a minute or two, if impermeable, and then withdrawn. When the caustic is applied to permeable obstructions, the bougie should be passed three or four times over the whole surface of the stricture. To impermeable strictures, the caustic should be applied with greater caution than to such as are permeable! for, should retention of urine

occur, it will be more easily relieved in the latter than the former. It usually happens that after one or two applications of the caustic, the bougie will be found to enter the obstruction. Before applying potassa fusa to impermeable strictures, every precaution should be used to guard against irritation. If convenient, the application may be made at bedtime; and should the patient have been subject to rigors or retention of urine, it will be best to administer an opiate injection about an hour before the operation. Contrary to what is generally supposed, potassa fusa, from its forming with oil and mucus a slimy saponaceous compound, admits of being more easily confined to the strictured portion of the urethra than the watery solution caused by the application of the nitrate of silver. This is one advantage in favour of the caustic alkali. Another, arising from this miscibility with oily substances is, that its action can be better regulated than that of the nitrate. It may either be used as a mild stimulant or as a powerful caustic. It appears to me, however, that the principal superiority of this caustic to the nitrate of silver, in the treatment of stricture, consists in its more powerful effect in removing hard strictures, and that, with perfect safety and comparatively with but little pain. It has been previously stated, that when used for the destruction of hard, gristly strictures, it must be more freely applied than recommended by Whately; but the quantity should be very gradually increased, and regulated according to its effects. Some of the accidents caused by the nitrate of silver, when used for the destruction of strictures, have arisen either from the slough which it produced having so completely obstructed the previously contracted channel as to cause retention of urine; or, on its separation, hæmorrhage to a considerable amount. From the tendency of the nitrate of silver to produce adhesive inflammation, it is probable that the coagulable lymph, caused by its free application, may form no slight barrier to its destructive effects. This tendency, I think, may in some degree account for the great number of applications of this caustic which were required in some of Sir Everard Home's cases.

"Potassa fusa, when used for the destruction of a stricture, instead of causing a solid slough, appears to exert its salutary effects by a process of inflammatory softening and dissolution of the thickened tissue forming the obstruction. A sufficiently free application of this caustic, to be effective in old hard strictures, is usually followed by more or less of a slimy muco-purulent discharge, at first generally with an admixture of blood, but soon becoming of a dirty white colour. The term abrasion, used by Mr. Whately, is not certainly the most appropriate to signify the effects of the caustic potass in the removal of strictures, for its action cannot be regarded as mechanical. The term appears to have been intended by him to express a slight solvent effect upon the surface of the stricture. Probably the best explanation of the action of these two caustics, when applied for the destruction of strictures, is, that the nitrate of silver causes a slough often sufficiently solid to obstruct the passage of the urine, whilst the more solvent effect of the potassa fusa is quickly followed by a thick slimy discharge of the tissues which it has destroyed. The good effects of potassa fusa are often strikingly manifested in highly irritable, very vascular strictures, which readily bleed upon slight pressure by the bougie. In many such cases three or four mild applications of the caustic will often be found to remove both their irritability and hæmorrhagic disposition, so as to render them easily dilatable. In strictures strongly predisposed to spasm, if not firm and of long duration, it will be best to apply the potass at first in such small quantities that its action may be merely that of a powerful stimulant, which may remove their morbid irritability sufficiently to permit of their subsequent dilatation. I believe, however, that in the majority of such cases, where the disposition to spasm is strongly marked, that the caustic must be used in suf-

ficient quantity to destroy the irritable surface of the obstruction. When a stricture has been so far removed by the application of potassa fusa as to admit the introduction of a middle-sized bougie, it will be best to discontinue the use of the caustic unless there should be difficulty in the subsequent dilatation, when an occasional application of the caustic will often be found serviceable. If potassa fusa be used with proper caution it will not cause bleeding of any consequence. Where patients are predisposed to rigors, they may occasionally occur after the application of the potash; but the unarmed bougie, it must be recollected, in such constitutions, will often have the same effect. In truth, the application of the caustic alkali has generally a remarkable effect in preventing the occurrence of rigors. Two or three applications have frequently so much relieved the irritability of the bladder attending bad cases of stricture, that patients have very frequently called my attention to this improvement in their condition, which has taken place often some little time before the bougie has passed through the obstruction. Instead of being obliged to rise every hour or two in the night to pass urine, as was the case previously to the application of caustic, they have only been disturbed but once or twice for that purpose. In two cases of impermeable strictures lately under my care, in which rigors had frequently occurred from the introduction of the bougie, they happened but once during my treatment, and that was, in each patient, a few hours after, by the use of potassa fusa, I for the first time succeeded in passing an instrument through the obstruction. The administration of an opiate will, however, in general, prevent the occurrence of rigors. The cases in which I have found the potassa fusa advantageous, may be generally described as,—1st. Strictures having a cartilaginous hardness, and impervious to instruments; 2dly. Strictures of long standing, which, although admitting the passage of a small bougie, bleed more or less freely on its introduction; 3dly. Irritable strictures. My views with regard to this method of treatment differ materially from those of Mr. Whately. I do not use the potassa fusa in all cases indiscriminately; but only in such as do not yield to simple dilatation. I have found it necessary to employ the caustic alkali, in many cases, in larger quantities than he recommended; the minute portions used by him having produced scarcely any perceptible effect upon strictures, which, however, yielded to its more free application. I have also found that the caustic may be advantageously used at shorter intervals than advised by that gentleman, which is frequently of no slight importance, especially to patients who have to come to London for treatment. I generally, as before mentioned, discontinue the use of caustic as soon as a stricture will readily yield to ordinary dilatation. As a general rule, it will be best to commence the use of potassa fusa in very small quantities, of the size of a common pin's head, especially in impermeable strictures. Very great care will be required in applying caustic of any kind where there are false passages; and in such cases, if the obstruction be beyond the straight part of the urethra, I use a curved canula for that purpose. Wherever false passages are known to exist, and where instruments have been regularly passed, before commencing the use of potassa fusa, the patient should be kept as quiet as possible for four or five weeks, by which time the false channels may have healed, or become so much closed as to be avoided with tolerable caution. Obstructions in the curved portion of the urethra, although requiring much care in the application of caustic, will usually be found more readily to yield to that remedy, or, indeed, to any other method of treatment, than when situated in the straight part of the canal. Except obstructions caused by severe injury of the urethra when it has been forcibly pressed against the pubes, there are none, according to my experience, more difficult of management, whatever means may be employed, than hard, tight strictures

of long standing, within the first four or five inches from the external orifice of the canal. In such strictures there is often considerable induration of the corpus spongiosum surrounding the obstruction, forming a firm zone of highly elastic tissue, which, although admitting of being stretched to a certain degree, yet, if further dilatation be attempted, irritation will ensue, and the contraction become worse. Where there is so much condensation of the corpus spongiosum, it cannot be expected that potassa fusa, or any caustic, can be safely applied for its entire destruction; but a few mild applications of the potash will often so much lessen the irritability of the stricture as to permit the introduction of a moderate-sized bougie so as to afford relief from all the more troublesome symptoms of the disease. It is fortunate that cases of this description are comparatively of very rare occurrence; but it is as well to know that there are such, which, whether you treat them by dilatation simply, by caustic, or by cutting, have so strong a disposition to recontraction as to defy human skill to cure them. Some pains should be taken to ascertain the precise point to which these strictures will admit of being stretched without irritation, and then, the bougie having done all the good it can, should not be increased in size. Strictures in the straight part of the urethra, which consist principally of thickening of the mucous and submucous tissues of the canal, with but slight induration of the spongy portion, are as easily removed by potassa fusa as those of the bulb."

Mr. Wade supports his views by several illustrative cases.

20. *The Perinæal Section.*—The merits of this operation are still a matter of dispute, but it cannot fail to be acknowledged, from the testimony of cases recently published in the 'Monthly Journal of Medical Science,' by Mr. SYME, that it is a safer and more successful operation than some surgeons, both in Edinburgh and London, are willing to allow. Time will, we believe, definitively pronounce in favour of Mr. Syme's views of the operation; but as the question at present stands, it is so mystified and distorted by personal bias, that an impartial reviewer must of necessity feel a difficulty in coming to any decided opinion. We shall, however, make it our business to notice the *practical* evidence which may be adduced on either side, and hope thus to be able to give our readers the opportunity of forming their own judgment on the matter. (*Vide* Art. 51.)

21. *Calculus.*—Dr. ELLIOTT HOSKINS calls attention to the possibility of dissolving calculi by injections into the bladder. The injections which he particularly advocates consist of solution of the nitro-saccharate of lead; of this, one grain mixed with five drops of strong acetic acid, is added to each ounce of water. From four to eight ounces are thrown in by a double flexible catheter each time, and renewed every ten or fifteen minutes. This solution, he says, excites strong solvent action on phosphatic calculi.*

22. *Prostate Gland, Diseases of.*—A monograph on the anatomy and pathology of the prostate gland, by Mr. ADAMS, surgeon to the London Hospital, will be found to be a very acceptable addition to surgical literature; the diseases of which it treats being frequent in occurrence and important both in their immediate and remote effects upon the economy. The subject is introduced by a minute description of the anatomy of the gland itself, its relative positions, and its function; after which the diseases to which it is liable are discussed in the following order:

* London Journal of Medicine, Oct. 1851.

Prostatitis.—When we consider the close connection of this gland with the bladder and urethra, we can understand its readily participating in irritation arising on either side. Accordingly, we find that it frequently becomes involved in gonorrhœal inflammation, or in inflammation of the neck of the bladder from any cause. When the prostate is inflamed, a train of symptoms set in closely resembling those of inflamed neck of the bladder but more intense, and somewhat modified in its phenomena. Thus the gonorrhœal discharge which may have ceased when the neck of the bladder alone is implicated, sometimes reappears as soon as the irritation reaches the prostate, but under an altered form, being more thin and gleety; a few drops of blood may also attend micturition or straining at stool. There is more or less pain in the perinæum, with frequent desire to pass water. In some cases one or other testicle becomes inflamed, or the spermatic cord is swollen and painful. Examined per anum, acute pain is felt, and the gland feels tumid, hot, and throbbing. In the latter case suppuration is portended.

In chronic prostatitis the symptoms undergo considerable alteration. There is no fever, but there is still perinæal pain. A slight gleety discharge is present, increased by indulgence in stimulants or venery. This condition is the precursor of permanent hypertrophy of the gland, but by proper treatment, all evil consequences may frequently be avoided.

We omit the author's description of the treatment of prostatitis both acute and chronic, and pass on to a subject of great importance, viz., the participation of the organ in the pathological conditions which give rise to spermatorrhœa. This affection, according to the author, may depend on two distinct pathological states, one chronic prostatitis, the other a simply irritable condition of the membranous portion of the urethra, the result of too frequent stimulation by unnatural means. He does not entirely admit the views of Lallemand, more particularly in reference to diurnal pollutions, being sceptical as to the escape of the seminal fluid with the urine. In the treatment, however, he follows that author in his commendation of cauterisation of the urethra, with Lallemand's caustic bougie.

The next affection alluded to by Mr. Adams is *Irritable prostate*. This is characterised by pain in the perinæum, testicles, and cord, itching of the anus, with frequent micturition, and slight mucous discharge from the urethra. In old standing cases, the orifice of the urethra presents a peculiar appearance, having lost its natural outline, and exhibiting a patchy redness round the orifice. Under the improper use of exciting medicines, the discharge sometimes becomes purulent, and the patient is often supposed to be labouring under gonorrhœa.

In the treatment of this affection, the author interdicts all stimulating medicines, as copaiba, cubebs, and infections. Cupping on the perinæum, warm hip baths, and alkaline mucilaginous drinks, followed by Chian turpentine, form the basis of his treatment.

One of the most important chapters in Mr. Adams's book is that on Hypertrophy of the prostate. This affection commonly shows itself after 50, but is often so insidious in its approaches that it has advanced to a considerable extent before it is recognised. The symptoms are thus described:—

“After such causes as may be supposed likely to produce the disease in question, as a too free indulgence in venery and the luxuries of the table, the patient complains of a slight sense of uneasiness about the region of the bladder, with pains shooting to the loins, down the thighs and into the groins and to the extremity of the penis; this is usually attended with but little disturbance to his general health, and is attributed to rheumatism or some other simple cause. This is a condition in which the surgeon is often consulted, and he

not uncommonly favours the idea of the patient, and prescribes an ordinary diaphoretic with a purgative and warm bath, by which the symptoms are either palliated or altogether removed for a time. If the patient still abstains from the indulgences before mentioned, he possibly may be completely relieved for a considerable period, and on the recurrence of a similar train of symptoms may have forgotten the previous attack. However, it usually happens that the symptoms return with some slight increase in intensity, when little or no relief is experienced from the use of the simple measures alluded to: he now observes, for the first time, that he has a more frequent desire to pass his water than usual, and that he voids but little water at a time; and that what he passes does not flow quite so freely as formerly; but still it comes in a stream, and is passed with force and without effort. In this condition he again seeks advice; perhaps simple measures are prescribed, but without relief; the desire to micturate increases in frequency and intensity, and he is called up repeatedly, especially at night, to pass his water, which, however, comes but in a very small quantity indeed, and is expelled by a sort of ejaculatory effort. His pains are now exacerbated, he becomes feverish, his tongue is a little furred, and his hands feel hot and dry, but he is not incapacitated from following his ordinary occupation: his clothes are constantly wet by the dribbling of the last drops of urine, or by the frequent escape of water from the bladder, the smell from which is ammoniacal and exceedingly offensive; the expression of his face is anxious, and presents an appearance characteristic of urinary disease. To this condition, if unrelieved, succeeds a train of symptoms of increased intensity and of imminent danger; thus the frequent desire to make water increases, the quantity passed at each effort diminishes, until at last he is unable to pass a single drop, and now labours under a complete retention of urine. It almost invariably happens that the stream of urine gradually diminishes in force, and that instead of being expelled, it rather runs over and dribbles away; sometimes he can pass it in a stream in very small quantities, but obviously never completely evacuates his bladder."

The author draws particular attention to the condition of the urine in the different stages of the disease, as well as to the anatomical lesions exhibited by the bladder. Among these he speaks of changes of capacity; formation of vesical pouches, and rupture of its coats. The morbid anatomy of the gland itself is minutely described. The gland becomes enlarged in all its dimensions. Its outer surface is smooth, or irregular and nodulated. All the lobes are usually implicated, the third or middle lobe frequently being involved in a higher degree than the lateral lobes. The enlargement is frequently accompanied with induration, which has given rise to the term scirrhus prostate. The results of this change in the dimensions of the gland are described by the author with great accuracy. Thus, independently of nervous radiating pains in the thighs, loins, and sacrum, it has a sensible influence in the urethra, bladder, and rectum. The urethra is stated to be increased in length, and its diameter increased, while other changes in shape and course ensue which are familiar to the practical surgeon.

The cause of this senile enlargement of the prostate, is considered by the author to be obscure; nor is it, he thinks, at all explained by the morbid anatomy. He is himself disposed to regard it as in some manner connected with the changes which the genital organs undergo at the decline of life, and to depend chiefly on continued venous congestion, kept up frequently in those in whom the disease occurs by the over stimulation of the almost extinguished generative powers.

In the treatment of enlarged prostate, the author properly lays great stress

on early and complete examination of the part. If this displays congestion of the prostate, the object is to remove this, and at the same time to render the urine less stimulating. The author advises cupping on the perinæum or sacrum to ten ounces; hip-baths, night and morning; and free action of the bowels. If, on the contrary, positive enlargement is detected, a different line of practice is required. The first thing to be done is to relieve the distended bladder, by the use of the catheter as frequently as circumstances seem to require. Leeches, or other active antiphlogistic measures, are, in the author's experience, either useless or injurious. He also deprecates the use of opium to allay the irritability of the bladder, as it has a tendency to increase the torpor of the cerebral functions, to which there is a sufficient tendency. The use of iron he also thinks injurious, as it tends to irritate the bladder, and may add the symptoms of inflammation to those already existing.

The author here glances at the treatment of the retention of urine from enlarged prostate, and the hæmorrhage, which is a frequent attendant upon it; under the former head, the reader will find a thoroughly practical exposition of the uses of the catheter.

The remaining diseases of the prostate gland, considered in Mr. Adams's volume, are,—scrofulous prostate; malignant disease of the gland in the form of scirrhus and fungus hæmatodes; prostatic calculi; and neuralgia of the prostate. He has also a concluding chapter on the dilatability of the organ.

Of neuralgia of the prostate, the author informs us, that it gives rise to a train of symptoms so similar to those of organic disease, that a diagnosis is often extremely difficult. A well-marked case is related, the treatment of which does not appear to have been satisfactory.

In concluding this imperfect sketch of Mr. Adams's Treatise, we have no difficulty in commending it to our readers, as a safe and accurate guide to the diagnosis and treatment of the diseases of this important region.

23. *Tuberculous Testicle*.—The French Academy of Medicine has been recently occupied in a long discussion upon the treatment of tuberculous testicle, arising out of a Memoir by M. Malgaigne, proposing a novel operation. Fistulous ulcers of the testicle are, according to the author, almost invariably the result of tuberculous softening of the organ, and appear under two forms. In one the ulcer is large, and the suppurating surface is on a level with the skin, forming the non-malignant fungus of the testicle described by English writers. In the second form, several simple fistulous openings are seen in the scrotum with inverted edges, and leading either separately or after inoculation to a deeply situated fungus, similar to that above alluded to. To remedy the first species of ulcer, several plans have been advised, such as compression, astringents, escharotics, ligature, excision, and autoplasty, or covering in the fungus by the integuments of the scrotum. In the second variety, different opinions exist as to the proper treatment, some surgeons recommending caustic injections, others seton, and some castration. It is to replace the latter severe measure that M. Malgaigne proposes to remove together the diseased integument and the softened portion of the testicle, endeavouring also to obtain union of the edges of the incision, by first intention. In many cases this is tantamount to castration, but the author thinks the moral effect upon the patient is not so painful as when the organ is entirely removed.

An animated discussion followed the reading of this paper, in which MM. Roux, Velpeau, and Robert took part. M. Roux objected that the author had confounded several different lesions under the same category, for instance, fungus of the testicle and tuberculous testicle, which he considers to be different diseases, the one seldom or never affecting both testicles, the other

frequently doing so. He also expressed his opinion, that the operation proposed by M. Malgaigne was much better than castration, and that as the organ was generally disorganised, there was no reason for preserving any portion of it, if an operation was decided upon. M. Roux is not, however, a great advocate for operating, as the disease often remains stationary, and may even get well under appropriate treatment. Much the same sentiments were expressed by MM. Velpeau and Robert.*

— Mr. COOPER (op. cit., p. 622) discountenances operative measures in tuberculous fungus of the testicle, giving the preference to constitutional measures, especially the use of mercury in the form of the iodide. To the ulcer he applies black wash.

24. *Treatment of Bubo*.—We have received a pamphlet by Mr. MILTON, having for its object the introduction of a plan of treating bubo, from whatever cause it may arise, so as to prevent suppuration. In the author's hands, resolution is said to have been produced in all cases submitted to him sufficiently early. This treatment consists in the exhibition of tartar emetic in the same manner as in pneumonia, by grain doses repeated every two or three hours. The local treatment used conjointly is either hot water, cold lotions, or ice. Mr. Milton candidly owns, that his opinions are received with doubt by his professional friends.

§ V.—*Injuries and Diseases of the Abdomen.*

25. *HERNIA—Reduction "en Masse."*—Our former volumes contain numerous notices of the reduction of hernia *en masse*; but we return to it in the present report to mention two communications of merit. The first of these, a pamphlet "On the Reduction of Strangulated Hernia en Masse," by Dr. GEORGE BLACKMAN, (briefly mentioned in our last Report,) gives a most comprehensive resumé of the subject, and is deserving of careful study.

The reduction of hernia, "*en masse*," may occur either—1. As a disease of the taxis. 2. By detachment and reduction of the sac during the operation, the sac having been mistaken for the intestine. 3. It may occur spontaneously. The author has been at the pains to collect, he believes, all the recorded cases under each head, of which he gives the following summary:

Of 48 cases, 36 were inguinal, 4 femoral, 2 neutral, and in 6 the situation is not mentioned.

Age.—In 19 only is the patient's age recorded, and in these it was as follows:—50, 40, 18, 13, 40, 55, 47, 68, 50, 30, 40, 42, 75, 30, 55, 59, 61, 75, 79.

Duration of Hernia.—In 18 cases, it is said to have been of "many years;" in 3, "several years;" and 1 was described as being an "old one;" 1, congenital; and the rest as follows:—12, 11, 54, 20, 30, 20, 30, 5, 12, 30, 40 years.

Sex.—In 27 cases in which this is noticed, all but 4 were males.

Size of Hernia.—In 20 cases where it is mentioned, 8 were "large; 5, size of "hen's egg;" 1, "turkey's egg;" 1, "pigeon's egg;" 2, "large walnut;" 1, "good-sized pear;" 1, half the size of "one's fist;" 1, "not small;" 2, "small;" 1, "scrotal."

Facility of Reduction.—Of 26 cases in which the circumstances connected with the reduction are recorded, 13 are said to have been returned easily, quickly, "without difficulty," by the patient; whilst in 14 it was only effecté

* Archives Générales, Août. Revue Méd.-Chirurgicale, Sept. 1851.

“after some attempts,” “after many attempts,” “with difficulty,” and after the use of “the warm bath and bleeding.”

Result of Operation.—20 cases were subjected to operation, of which 11 recovered, 1 is supposed to have recovered, whilst 6 died from peritonitis, effusion of fæcal matter, from gangrene, and in 2 cases the stricture was found undivided.

Spontaneous Cure.—This occurred in 1 case only.

Reduction of Sac during Operation.—Under this head the collection embraces but 9 cases, 7 femoral and 2 inguinal. Velpeau, it will be remembered, states, that he has become acquainted with 15 cases of this kind, but we give the number only of those which we ourselves have been enabled to collect.

Result.—5 proved fatal, 3 recovered, and 1 not stated.

Spontaneous Reduction.—Variety, crural; age 61; duration 28 years; size of hen's egg; operation successful.

Diagnosis.—Many circumstances, the author observes, interfere with the formation of a correct diagnosis, where symptoms of strangulation continue after the reduction of a hernial tumour. The intestine may be returned, and the stricture yet maintained by the omentum which forms a kind of sac inclosing the bowel. Such cases are related by Scarpa, Callisen, Richter, and more lately by Mr. Prescott Hewett (*Med. Chir.-Trans.*, vol. xxvii, 1844). Mr. Callaway also records a case (*Lancet*, 1829).

The symptoms directing reduction “en masse” are said by Mr. Robert Wade to be—the absence of that fulness of the ring and end caused by the presence of the hernial sac, an unusual largeness of the aperture through which the hernia has descended, a fixed circumscribed pain in the neighbourhood of the ring, and in some cases a tumour in the same situation. Le Dran, also, after remarking that the persistence of the symptoms of strangulation may depend upon an inflammation of the bowels, &c., &c., goes on to say, that if this be the cause the pain will be felt almost equally throughout the whole extent of the abdomen; but if they proceed from a volvulus, it will be more acute in one fixed and permanent point; and if the reduction of the hernial cyst be the cause, he declares that the surgeon cannot mistake, as he will feel a vacuity under the ligamentum Fallopiatum, or in the ring. Another point he notices of much importance, viz., when the parts are reduced, he will be insensible of the noise generally attending the reduction of a hernia, “the whole tumour passing in a lump, under the ligament, (if it be crural,) like a tennis ball.” This last sign was particularly insisted upon by Arnaud, but, as Mr. Lawrence has observed, the return of intestine, although frequently, is not necessarily accompanied by the peculiar rumbling or gurgling noise which is produced by the passage of air through the strictured part, and in ordinary cases it sometimes goes up all at once, so that we should not attach too much importance to the presence or absence of this sign, considered of so much moment by Arnaud and Le Dran. Dupuytren lays great stress upon the two following symptoms, viz., a fixed and circumscribed pain in the hypogastric region, behind the opening through which the hernia has protruded, and the existence of a tumour more or less perceptible in the same situation; but in one of the cases related by Mr. Luke, on the fourth day after the reduction of the hernia, no tumour could be felt, while on the eighth day the infiltration of highly offensive sanious fluid had given rise to a tumefaction in the course of the inguinal canal. If present, the author admits that it would materially aid our diagnosis, but in some of the cases in his collection, the fundus of the sac was found somewhat remote from the vicinity of the rings, although both Le Dran and Dupuytren asserted that it could not be far distant, as the sac itself is formed by a part of the peritoneum in the

immediate neighbourhood of the canal. Indeed, he continues, the closest examination of the patient can afford us but *probable* evidence of the occurrence of the reduction *in mass*, and if called to a case where, after the successful application of the taxis, the symptoms of strangulation still remain, we find the hernial aperture large and empty, the spermatic cord distinct and isolated, even though no tumour can be felt in the vicinity, and though there be no tenderness on pressure, we shall be perfectly justified in resorting to an explorative operation.

Treatment.—The author states that our first effort should be directed towards the reprotrusion of the hernial tumour. Sometimes the slightest exertion will suffice; in others it cannot be accomplished without the ring is widely dilated. If coughing, sneezing, jumping, and straining, do not effect the descent of the hernial tumour, the inguinal canal is to be laid open, and the sac being dragged down, the stricture is to be divided.

Mr. Luke directs that, after the neck of the sac has been divided, during the reduction of its contents, caution should be used for the prevention of that of the sac also, an accident not at all unlikely to occur, in consequence of the breaking up of its adhesions to the surrounding parts. We may easily ascertain that the contents of the sac have been liberated by passing the finger through its neck.

The author repeats the fact that after a hernial tumour has been returned by the taxis, the patient may still perish with all the symptoms of strangulation, though the sac be empty. The peristaltic action of the intestines may be prevented by the inflammation which their incarceration has produced, or they may still be strangulated by the apertures of the omentum or mesentery through which they have protruded into the hernial sac, and which still embrace them, although reduced. If the exposure of the inguinal canal discovers the empty hernial sac adhering to the spermatic cord, he says we may reasonably conclude that the patient suffers from one of the causes mentioned; and if the parts affected cannot be reached by the finger, or made to redescend by the efforts of the patient, our only resource will be to make use of the means proper to subdue peritoneal inflammation, if it exists, and to restore the action of the intestinal canal.

The exploratory operation will, the author affirms, even from the exposure of the inguinal canal alone, remove many of the obscurities of the case. If, for example, as in one of the examples which occurred to Dupuytren, the patient is unable to give an account of himself, but is labouring under all the symptoms of intestinal obstruction, if the incision of the integuments brings into view an empty hernial sac, the non-existence of the reduction *en masse* will be at once established, and our treatment must then be modified according to the other circumstances of the case. The dependence of the symptoms upon some form of internal strangulation may perhaps be established by the character of the matter vomited, as has been noticed by Dupuytren. He declares that the vomiting of mucous or bilious matter may indicate an irritation, a gastritis, or enteritis, as well as a strangulation, but if it be of a golden yellow colour, having a stercoral odour and a *matière delayée*, there need be no doubt upon the subject. We have taken it, he observes, for granted that, in the examination of the inguinal canal, if the hernial sac be found at all within it, it will be seen in *front* of the spermatic cord, but it will be well to bear in mind the deviations in this respect which sometimes take place, and which have been described and delineated by Camper, Scarpa, Sir Astley Cooper, Mr. Lawrence, and others. These varieties in the course of the cord and its vessels, however, are so rare, that they can hardly be expected to embarrass our proceedings.

—The relative advantages of opening the normal sac or leaving it unopened, in operating are ably portrayed in a lecture by Mr. SPENCER WELLS.* In the first place the author inquires, “what are the dangers believed to depend on opening the sac? Secondly, are these dangers avoided by not opening the sac in cases where it is possible to divide the stricture without making this opening? Thirdly, how far is it generally practicable to divide the stricture without opening the sac? Fourthly, what are the dangers we incur by doing so, or by attempting to do so, and how far do these dangers compromise the safety of the patient, as compared with those which solely arise from opening the sac? Lastly, how shall we decide in any particular case whether to open or not open the sac?”

“First, What are the dangers consequent upon opening the sac? We all know the difference between a penetrating and non-penetrating wound of the abdomen, between a case of simple incised wound of the abdominal parietes, and one in which the peritoneal cavity is also opened. We know that the one case is a comparatively trivial and by no means dangerous one, while the other is one of the most serious and alarming nature. A little local uneasiness, and some slight febrile disturbance, is all that usually occurs, or can reasonably be anticipated in the one case, while in the other we have a well-known assemblage of threatening symptoms, small low pulse, pale, anxious countenance, cold extremities, extreme weakness, great pain, vomiting, hiccough, and convulsions. I do not mean to say that in every case of wound of the peritoneum, such extreme effects are produced, but I do say, that in every case I have ever seen or read of, they were observed to a greater or less extent. I am speaking of wounds of the abdomen, in which the peritoneal cavity is opened, but in which there is neither internal hæmorrhage nor escape of fæces from a wounded intestine, and I do say that, in all such cases, experience teaches us that the danger of peritonitis is very great, that its occurrence in some degree is almost certain and inevitable. I do not care whether it is the simple injury to the peritoneum which causes it to inflame, or whether the inflammation is caused by the entrance of air. What now interests us is the fact, that whenever the peritoneal cavity is opened by a wound, peritonitis will almost invariably follow, and very frequently to a dangerous degree. Now, in opening a hernial sac, we really make an incised wound of the peritoneum. It may be said, that the sac is a mere process of the peritoneum, a detached portion of the membrane, less liable than other parts to take an inflammatory action. But once open this sac, once divide the stricture, and we have an external wound communicating directly with the general peritoneal cavity, and we as commonly and certainly observe symptoms of peritonitis after such opening and division as after simple penetrating wounds of the abdomen. We see precisely the same symptoms during life, whether the hernial sac be opened by the surgeon, or the peritoneal cavity by accidental injury; and in fatal cases we observe exactly the same morbid appearances after death. It is peritonitis which kills the patient in either case, and in both we find its traces in the effusion of serum and lymph, and in the adhesions of the viscera to each other and to the abdominal parietes.

“Again, when the sac is opened there is danger of hæmorrhage and of wounding the intestine. These are of far less moment than the danger of peritonitis, and may be considered as almost nothing when the patient is in the hands of a careful surgeon. If the surgeon examines everything he divides before applying the knife, he can never wound a vessel of any consequence. Indeed, I believe you will have some difficulty in finding a case on record in

* Med. Times, Dec. 1850.

which a patient clearly died from the effects of hæmorrhage after herniotomy. The danger of wounding the intestine is somewhat greater. I have seen it take place more than once when the operation was performed by surgeons of deservedly high reputation. Some sudden twist or start of the patient, some slip of an assistant's fingers, at a critical moment, has brought the edge of the knife in contact with the intestine, and irreparable mischief has been the consequence. The accident is not necessarily fatal, but it adds enormously to the chances against the patient. Unless under very peculiar circumstances, however, it must be considered more as the fault of the operator than as a danger necessarily connected with opening the sac. At the same time it is a danger which is *certainly* avoided by leaving the sac intact.

"There is another danger consequent upon opening the sacs, which I am confident is of far more importance than many surgeons believe—I mean the entrance of the pus and secretions of the wounded parts into the peritoneal cavity—blood, serum, and pus in varying proportions and quantity are always found for some days about the wound made in herniotomy. In whatever position the patient lies, whether on side or back; however the wound may be dressed, whether stuffed with lint, or left to itself with water-dressing, or sealed hermetically from the air by sutures and strapping, I believe it to be absolutely impossible to prevent the entrance of some portion of the secretions of the wound into the peritoneal cavity, when the cavity and the wound have been brought into direct connection by opening the sac. And I believe, further, that the irritation consequent upon this effusion into the cavity is a frequent cause of fatal peritonitis."

The author continues:—

"You may now see that a surgeon who operated upon every case of strangulated hernia which came before him by opening the sac before dividing the stricture would run into one set of dangers; and a second, who never opened the sac, into another series. Either would invariably escape some dangers from which his opponent was free. The one diminishes the danger of peritonitis, and avoids altogether those of hæmorrhage, wounded intestine, and entrance of air, or the secretions of the wound into the peritoneal cavity; but he runs the risk of returning the protruded parts while still strangulated, or when in such a condition that their return would be fatal. The other is perfectly safe in these two latter respects, but, although by proper care he may avoid the evils arising from wounds of blood-vessels or intestine, he fearfully increases the risk of the occurrence of peritonitis—the chief cause of death after herniotomy. The question therefore resolves itself pretty nearly into the following terms:—Is the risk of returning strangulated parts, in the one operation, equal to the increased risk of peritonitis in the other? or, putting it conversely, Is the risk of peritonitis, consequent upon opening the sac, so great as that of returning protruded parts in a doubtful, strangulated, or gangrenous condition?

"If we endeavour to arrive at a just appreciation of the comparative amount of these dangers by statistical inquiry into the relative success of the two operations, we are at the very outset of the inquiry met by considerable difficulties. It is very easy to collect a number of cases operated on in one manner, and to give the proportion of deaths, as compared with a series of cases operated on after the other plan; but then comes the doubt as to the condition of the patient at the time of operating—whether he was not in such a state that either operation would have been useless, and death inevitable. Doubts will also arise, whether the surgeons operated with equal skill and care—whether they treated their patients with equal judgment after operation—or whether there were not circumstances with regard to the age and general

health of the sufferers which influenced the result very materially but altogether independently of the effects of either operation. And it unfortunately happens, from the manner in which the results of experience are often recorded, that it is impossible to clear up such doubts. For instance, Dieffenbach, who had probably performed herniotomy more frequently than any other surgeon of any age or country, gives a mere general statement that he lost fifty patients out of between 650 and 700 operations. He does not state how often he opened or did not open the sac. But the tenor of his writings would lead to the belief that he opened it as a general rule, although, in cases of femoral hernia, he was becoming convinced that it was better not to do so. He gives no sort of numerical statement of his success in connection with this important step in the operation. Mr. Hancock has collected from various sources 474 cases in which the sac was opened. Of these, 167 died, or rather more than 1 in 3; but then, on examining into the history of the cases, he came to the conclusion that 103 of them were in such a condition at the time of operating that they must have died whatever had been done. If these 103 cases, then, are taken away altogether from the calculations, the mortality is rather less than 1 in 6, instead of being rather more than 1 in 3. In the same manner he has collected 74 cases in which the sac was not opened, the deaths being 22, or 1 in $3\frac{1}{3}$. From them he deducts 5 in which the patients' death was independent of the operation, and the proportional mortality then appears as 1 in 4. Yet this great mortality under either operation, so frightful when compared with Dieffenbach's loss of only 1 in 13, is proved to be but too true by other inquirers. Mr. Luke tells us, that of cases reported in British journals in which the sac was opened, he found *one half* of the patients died. Malgaigne's report of the Parisian hospitals gives 133 deaths to 220 operations—considerably more than one half; and, on looking to reports of British hospitals, we find the mortality varying from one-half to 1 in 4. The reports of cases in which the sac was not opened are less numerous; but if we take Mr. Luke's cases, and those recorded by Mr. Teale and Mr. Gay, in their works on hernia, we shall not find the mortality to be greater than 1 in 9. In the cases examined by Mr. Hancock, as I told you, he calculates it as 1 in 4; but in those quoted by the other authorities just named, it is not greater than 1 in 9. All this should convince us of the necessity which exists for some exact registry of cases occurring in all our hospitals, so arranged that the results could be easily attainable by any scientific inquirer. If we could only obtain authenticated notices of all the operations for strangulated hernia in the hospitals of Great Britain for one year, we should do a great deal towards the settlement of this important and much disputed question, and I hope the day is not far distant when some condensed summary, or systematic report, of all cases treated in every hospital, will be published annually. As it is, we must say that the facts before us are not sufficiently numerous to enable us to decide the question upon statistical grounds. We must, therefore, argue it upon other considerations.

“Now, what is the mortality, when we are able to reduce a hernia strangulated, or apparently strangulated, without any cutting operation, by means of the taxis? We all know that it is very small indeed. Mr. Luke gives us an account of 447 such cases, of which only 13 died, or about 1 in 34, and I think if each of us looks to his own experience in this matter, we shall say that this proportion of deaths is quite as great, and probably much greater, than we have ourselves observed. Where then lies the cause of the frightful difference in the result of the taxis, or of the operation by opening the sac, the one 1 in 34, the other from 1 in 2 to 1 in 6? Simple incision of integuments, and of the fibrous coverings of the sac, could do little towards an unfortunate result.

Wounding the intestine is a very rare occurrence. Fatal hæmorrhage is scarcely ever heard of. We now and then hear of a hernia being reduced in mass, the stricture still strangulating the hernia, but so rarely, that such a case is talked of as a wonder. And if we put aside those cases of long-standing strangulation, in which the intestine or omentum was in such a condition at the time of operation, that the operation had nothing whatever to do with the fatal result, we find peritonitis to be the cause of death. It is peritonitis we have to dread, and to do all in our power to avoid. We have the full knowledge that a penetrating wound of the abdomen is almost certain to cause peritonitis in a healthy subject, and to ensure it in a case where it is already commencing; and each one should ask himself, before opening the sac of a hernia, shall I make an opening into the abdomen of this patient, and thereby expose him to the risk of peritonitis? If I cannot return the hernia without, I have no choice—I must open the sac, but if I can, shall I run into the danger of peritonitis, rather than incur the risk of returning the hernia unrelieved from strangulation? For my part, I can only say that I would not. I consider the danger of peritonitis *certain*—that of reduction in mass exceedingly small; and where I had the choice, I should never run into a certain or probable danger, even although that were small, to avoid a greater, which was only just within the bounds of possibility.

“This brings me to the last question I proposed to discuss: In operating upon any special case, how are we to decide whether to open the sac or not? and in answering this I have only time to state a few general maxims without pretending to discuss them fully. In the first place, then, I would say, look to the time of strangulation as regards the probable condition of the intestine or omentum. Has this been long enough to render the intestine gangrenous?

“Should the general condition of the patient, the state of the tumour, the colour and appearance of the integuments, and, above all, the existence of a fetid odour while making the incisions, favour the supposition of gangrene, then I say, by all means open the sac and examine the intestine before determining whether to return it to the abdomen or not. Secondly, I would add, never employ a greater amount of force or pressure to return a hernia, after dividing the covering of the sac, than you would when attempting to return it before such division. You thus avoid the danger of reduction in mass; and should such an occurrence take place, you would be able to recognise it by its suddenness, as compared with the gradual gurgling manner in which a hernia usually returns. In every case, then, in which moderate pressure sufficed to effect reduction without opening the sac, I would most carefully refrain from opening it. Thirdly, I would look upon the operation external to the sac as something between the simple taxis and ordinary herniotomy. When the taxis proved unsuccessful, I would divide the integuments and the fibrous tissues about the seat of stricture, and, provided there were no good grounds for belief in gangrene, I would return the intestine, if the employment of a moderate degree of pressure enable me to do so. If I succeed, the patient escapes the danger of a penetrating wound of the peritoneal cavity; and if I do not, I can then complete the ordinary operation by opening the sac. I expose the patient to no danger by such trials, and I probably save him from the greatest of all the dangers attendant upon the operation. I adapt each operation to the cases to which it is suited, and avoid the evils of exclusively following either.”

26. *Complications of Hernia.*—Mr. ROBINSON, whose remarks on internal strangulation of the bowels appear in the present volume, gives in a preceding portion of this valuable essay, an epitome of the chief complications to which

external hernia is subject. These will be sufficiently shown in the following conclusions:—

1. Symptoms of strangulation may continue after a hernia has been apparently reduced—the reduction *en masse*, as it has been called. This may be owing to one of two causes; either to the return of the intestine to the upper part of the inguinal canal, and not into the abdomen, constriction therefore continuing at the internal ring; or to the return of the sac, together with the hernia constricted by it.

2. The intestine may be universally adherent to the sac. It is very important to ascertain this, and much may be learnt by pinching up the sac.

3. The direction of the vessels cannot be relied upon as a distinguishing mark between the intestine and the sac.

4. Mortification of the bowel may be simulated by the effects of tobacco; and, in doubtful cases, an operation ought to be performed.

5. Mortification of the bowel may be simulated, in some degree, by the collapse of jungle fever.

6. Foreign and irritating bodies *may* pass through an *irreducible* hernia without any ill effects.

7. The bowel may redescend after operation, may again become strangulated, and again require operation.

8. Strangulation may occur in a person the subject of double hernia; and a doubt may arise as to which is the hernia requiring operation. In such a case, the hernia that has existed the longest, and is most tense, should be the one first subjected to the knife.

9. A hernia may pass in an unusual direction.

10. Peritonitis may be coexistent with hernia, in cases where the latter is in no way implicated as a cause.

11. There may be a reducible hernia in one groin, an irreducible hernia in the other, and peritonitis.

12. Strangulated hernia may occur subsequently to peritonitis. If this could be known, it would be very desirable not to open the sac; if it be opened, and numerous adherent convolutions descend so as to prevent their being covered by the integuments, the gut should be punctured to diminish its contents.

13. Enlargement of the inguinal glands may be combined with strangulated femoral hernia, and cause great obscurity.

14. Strangulated femoral hernia in old, irritable, and weak persons, may be rapidly fatal from collapse, scarcely, if at all, to be distinguished from that which accompanies malignant cholera.*

27. *Diseases of the Rectum, Fistula and Hemorrhoids.*—Mr. MARSHALL has introduced a method of operating for these diseases, in which the aid of galvanism is brought to bear. The peculiarity of his method consists in causing a red-hot platinum wire to take the place of the bistoury, the heat being supplied by the action of a galvanic battery. The first patient upon whom Mr. Marshall operated, was the subject of fistula in ano. The operation was performed in the following manner:—A battery of six cells was placed close to the operating table; and the conductors were rendered flexible by an elastic tube filled with mercury. The pole held by the operator's hand was in immediate connection with the battery, but on the left side the current could be completed or interrupted by the intervention of a capsule filled with mercury. The extremities of the poles, slightly covered with mercury, were then connected with short holders, to which a platinum wire could easily be

* London Journal of Medicine, May 1851.

fixed, and when the assistant dipped the left pole into the mercury, the wire was seen almost immediately to become red hot.

Now the great advantage of using the galvanic force in this manner is, that the wire may be disposed upon the affected part whilst *cold*; it is easily adapted by being flexible, and when it is so placed as to answer the operator's purpose, the circuit is completed, and the effect produced in the direction which the surgeon gives to the wire.

The patient having been put under the influence of chloroform, Mr. Marshall introduced one end of the platinum wire into the fistulous tract, and made it reappear at the anus; the two ends were then connected with the poles, the circuit completed, the wire became red hot, and was gently brought downwards, dividing all the interposed tissues, and cauterising them at the same so effectually as to prevent any amount of hæmorrhage. The only dressing used was a piece of lint dipped in cold water applied externally.

Mr. Marshall has found from previous cases, both in private and hospital practice, that the whole tract heals very rapidly from the bottom after the casting off of the eschar, which separation generally takes place in a few days.

The second patient was affected with external hæmorrhoids, connected both with the verge of the anus and with the lower portion of the mucous membrane of the rectum, the protruding mass being as large as a pigeon's egg. Chloroform having been administered, the hæmorrhoidal tumours were drawn out by a peculiar kind of forceps, and the heated wire slowly drawn across the pedicle of the mass. This was repeated for different portions of the growths, and where a little oozing of blood took place, the wire was made to cauterize the part slightly, which measure at once stopped the flow of blood. Mr. Marshall stated that it was important that the wire should act rather slowly, as a rapid section was likely to allow of a little hæmorrhage. The time taken to sever a tumour did not, however, as far as we could judge, exceed forty seconds.

The forceps to which we just alluded were constructed according to Mr. Marshall's directions; they differ from the usual instrument in having a ring about an inch in diameter at the end of each branch; when the forceps are closed, the rings are superposed, and gain a very firm hold of the part to be secured. Mr. Marshall prefers these forceps to the vulsellum.

The third patient was affected in the same manner as the last, the extruding mass of hæmorrhoids being, however, somewhat larger and more congested. The operation was conducted precisely in the same manner as in the second case; here, however, either from the congestion being great, or the division a little too sudden, the hæmorrhage required the tying of a vessel, which latter was so large that the cautery applied to it could not control the bleeding.

Mr. Marshall took occasion to remark to the pupils that these were tentative operations, and that further trials would be necessary to ascertain in what cases this peculiar mode of simultaneous excision and cauterisation was used.

28. *Ulcers external to Sphincter Ani.*—Mr. HILTON* in his lectures on diseases of these regions, divides ulcers into three classes. 1. Ulcers external to the sphincter ani. 2. Ulcers within the circle forming the internal sphincter. 3. Ulcers beyond or internal to the sphincter.

The indications for the treatment of the first kind are, 1st, to keep the patient in a recumbent posture, so as to favour the emptying of the hæmorrhoidal veins; 2d, to keep the bowels open by mild laxatives. Under these measures the painful sensations are greatly relieved. Benefit is also derived from the local application of equal parts of Unguentum Opii, and Unguent. Hydr. fortius.

* Lancet, May 17, 1851.

The principal remedy for the irritable ulcer, which forms the second variety mentioned by Mr. Hilton, is division of the sphincter. The operation is thus described:—

This operation is proposed in reference to the mode of contraction of the sphincter muscle, which is towards its own centre, and the object in dividing it is to do away with its contraction in that direction for a short time, so as to allow the fæces to be evacuated easily, and in this way to allay the irritation caused by their passage, whilst the ulcer, being undisturbed by muscular action, rapidly heals up by granulation. The operation being determined on, it is to be performed as follows:—Having ascertained the position of the ulcer, which will most commonly be found to be situated on the posterior part of the rectum, place the patient on his back, or in any convenient position, on a table or bed before you. The speculum should now be introduced, with the slide corresponding to that part of the rectum in which the ulcer is situated; when the ulcer is clearly seen, the internal sphincter muscle should be divided from without inwards by means of a sharp-pointed bistoury carried directly through the centre of the ulcer. Some surgeons, however, object to the division of the sphincter by the knife, and recommend the forcible introduction of the finger through the anal aperture, in order to rupture some of the muscular fibres of the sphincter, and so favour the healing of the ulcer by granulation. This operation is very uncertain in its effects, and the author has never yet known it to succeed. Other surgeons advise the introduction of the finger up the rectum, and having passed the straight probe-pointed bistoury upon it, to divide the sphincter from within outwards. This operation requires extreme caution, as we are liable to wound more than we intended or more than is necessary, especially if the patient should chance to move his pelvis at the moment of the operation. In one instance which has come under the author's observation, where the sphincter was divided in this manner, the operation was followed by profuse arterial hæmorrhage, which required pressure with the finger for several hours before it could be arrested.

In a second instance the hæmorrhage was so severe from a large artery as to retard the recovery of the patient for a considerable time; and there is not much doubt but that cases have occurred in which the pudic artery itself has been divided by this mode of operation. Another disadvantage also, is the liability of inflicting a wound upon the surgeon's finger by the subsequent effect of the simple puncture, of which, in operations about the rectum, more than one life has been lost. Another mode of performing the operation is by introducing the conical end of a tallow candle up the rectum, and then, with the sharp-pointed bistoury, dividing the sphincter from without inwards, the point of the bistoury being buried in the candle, when both are withdrawn, and thus preventing the liability of wounding the opposite wall of the rectum. The author thinks, however, it is always far preferable to see what one is about, than to perform an operation, as it were, in the dark; and it is on this ground especially that he recommends the speculum ani which he is in the habit of using; in size and shape it resembles the ordinary speculum, being about three inches in length. It differs from it, however, in being of plated metal instead of glass, whilst a quarter of its circumference is made to slide in and out in a small groove. On first introducing the instrument, we should always endeavour to place the slide opposite the ulcer; and having effected this object, the slide should be withdrawn when the size and character of the ulcer can be clearly seen. The speculum is also furnished with a handle, which places it more under our command during its introduction, and enables an assistant to steady it in any position required whilst performing

the operation. In addition to the great advantage of allowing the operator to see about, the speculum also enables him to discover the source, and arrest any hæmorrhage that may arise as the consequence of the operation. Thus, if important bleeding should come on after the sphincter has been divided, he should not attempt to withdraw the instrument immediately, but search for the bleeding vessel, and if it proceed from an artery (for branches of the hæmorrhoidal are occasionally divided), place a ligature upon it; but if it be a general oozing of sufficient importance to require its arrest, he should plug the speculum with lint; by so doing he may make pressure to any extent he pleases on that part alone where it is required. These remarks apply also to the operation for fistula in ano. Not many months since, the author divided the sphincter of a patient in the hospital for this disease, when a small artery bled very freely. By the aid of the speculum, however, he had no difficulty in seeing and securing it, thus placing the patient in a state of comparative safety after the operation, and relieving him and the author from that anxiety and apprehension which must always exist whilst hæmorrhage continues. These circumstances all tend to show the advantage derived in dividing the sphincter, by the use of the speculum over the other modes of operation which have been recommended; it enables us to see clearly what we are about, and places any hæmorrhage that may occur under our immediate control, and may be compared to performing an operation in the light instead of the dark.*

* Medical Gazette, Jan., Feb., 1851.

III.

REPORT ON THE PROGRESS OF MIDWIFERY AND DISEASES OF WOMEN AND CHILDREN.

Bibliography.

THE productions of the press connected with the Obstetrical Science during the past six months are few, and but two have reached us; one a third edition of Dr. RAMSBOTHAM'S standard work on the 'Principles and Practice of Obstetric Medicine and Surgery,'* the other, a brochure on the 'Management of Women at the Critical Periods of Life,' by Dr. TILT.

1. Of the merits of Dr. Ramsbotham's well-known and highly appreciated volume, the strongest testimony is derived from the fact that upwards of four thousand copies have been circulated since its first appearance. It is therefore only required of us to point out the improvements and additions which give the present edition still greater claims to the attention of obstetrical practitioners.

Since the issue of the last edition, one of the most startling as well as important applications of the discovery of chloroform has been made in its use for the mitigation of the pains of natural and operative labour. A full notice of the subject has therefore been incumbent upon the author, and we accordingly find him devoting several pages to its consideration. He also introduces a few remarks on the application of galvanism in labour; on turning in head presentations; and on removal of the placenta before the child. We may add, that the volume is profusely enriched with plates, in Bagg's best style, illustrating the various stages and complications of labour.

In his chapter on anæsthesia in labour, Dr. Ramsbotham takes a rapid glance at the history of anæsthesia in general, and of its application to obstetric practice by Professor Simpson. He then inquires into the evidence afforded up to the present time, as to its efficiency and safety. He premises that the question is more complicated than in its relation to surgery or medicine. He proceeds to examine the various points to which our readers have on several occasions had their attention directed, viz., its effects upon the uterine contraction, the maternal circulation, and the viability of the fœtus. The conclusions to which he has been led are seen in the following extract:—

“Much misapprehension has arisen in the mind of the public, and especially the female portion of it, regarding the character of anæsthetic inhalation, and the direct effects which the vapour occasions, by the fervency with which its virtues have been proclaimed, and the erroneous qualities attributed to it.

“Those who have come forward as the chief advocates for anæsthetics under

* The Principles and Practice of Obstetrical Medicine and Surgery in reference to the Process of Parturition, by Francis H. Ramsbotham, M.D. Third Edition, enlarged. London, Churchill, 1851. 8vo, pp. 720.

labour, have either entirely denied, or maintained an undisturbed silence, in respect to *their intoxicating* properties. The public has been led to believe, that their action was merely soporific and anæsthetic; they have been told that, "in most cases, the mothers after delivery, on waking from their anæsthetic sleep, have expressed surprise at their own feelings of strength and perfect well being;" that the patient "stated her sensations to be those of awakening from a comfortable sleep," &c. Thus, the true condition into which the patients have been thrown, as well as the dangers they have incurred, have been carefully kept from view.

"No doubt it is a great bait to offer, and a great boon to promise to a woman who is looking forward with anxiety to her approaching confinement,—that she is to be lulled into a sweet, placid sleep:—to be perfectly unconscious of all the distress and suffering attendant on labour,—to be recalled to the world only by the grateful cries of her infant. But if the case were fairly and honestly put before them;—if they were informed that they might probably be made *dead drunk*, but must certainly be reduced to that condition which the law designates *drunk and incapable*; how many, it may be asked, of our high-born dames,—how many, possessing common feeling,—how many, indeed, removed from the very lowest orders of society, would be found to avail themselves of the immunity from suffering which anæsthesia holds out, at such a sacrifice of moral obligations? I cannot help thinking, and I may add, also, hoping, for the honour of female nature, that those who have acceded to the proposal have been betrayed into acquiescence by the belief that they were merely steeped in sleep, and not drowned in intoxication. And yet nothing seems more clear, than that they must be cast into the intense stupefaction of drunkenness, before they can be rendered oblivious to the mental anxieties and corporeal suffering incidental to their situation." (p. 180.)

From these remarks, our readers will be prepared to find Dr. Ramsbotham a strenuous opponent to anæsthesia. He would not, in fact, sanction it even in operative midwifery. The only contingency under which he would hear of its application, is thus expressed:—

"Suppose, for instance, the fœtus lay transversely in utero, the membranes perhaps having been ruptured some hours, if the patient obstinately refused to submit to delivery, as I have known the case,—if she were very boisterous and riotous, and would neither be persuaded nor controlled,—I should deem it my duty, notwithstanding, to deliver her, not only for her own sake, but to preserve the child, if still alive; and if that could be accomplished in no other way, I should not hesitate to employ etherisation, and take advantage of the quiescence thus induced for the purpose of performing the operation; being thus driven to a choice of evils, and preferring even the dangers of chloroform to the chance of seeing the uterus ruptured, or the woman sink from exhaustion." (p. 182.)

As it is our object to give a transcript of the opinions of others, and not to obtrude our own sentiments, we forbear to make any comments on the above quotation; having, however, made it our business to lay the various writings on the subject before our readers, we leave them to form their own judgment, assisted, as by this time it probably is, in all instances, by personal experience.

2. Dr. TILT'S volume* contains an amplification of a series of papers which appeared in the '*Provincial Medical and Surgical Journal*,' on the important subject of the medical and hygienic management of the female, at several epochs of her life.

* On the Preservation of the Health of Women at the Critical Periods of Life, by E. J. Tilt, M.D., &c. London, Churchill, 1851.

Of the five chapters of which the work consists, the first is occupied with the management of the female prior to the first appearance of the catamenial functions. The second, with their management during the continuance of the function. The third is on the right management of women during the matrimonial life. The fourth and fifth, on the treatment of the disturbances and diseases incidental to the cessation of the menstrual discharges. In each chapter we find very considerable practical information, and evident traces of careful investigation into the natural history of menstruation; but on the other hand, it cannot be denied that Dr. Tilt appeals somewhat too manifestly to public approbation, and thus disfigures an otherwise meritorious production.

§ I.—*Diseases of Women unconnected with Pregnancy.*

3. *Imperforate Vagina.*—In our last volume, page 184, we recorded a remarkable case of imperforate vagina, by M. DEBROU. Upon this case the author made certain comments, which we now supply.

In the consideration of such cases, two questions present themselves.—1. Is it proper to operate on girls arrived at puberty, with imperforate vagina and uterus? 2. In successful operations, can marriage be safely advised? The latter question is replied to first, by the following evidence:—

M. Amussat recorded, in the '*Gazette Médicale*' for 1835, pp. 785 and 817, a case in which he had operated for congenital absence of the vagina. He pronounced in favour of marriage; but there were no facts by which to prove the correctness of his opinion. Dr. Kluyskens also related a case in the '*Annales et Bulletin de la Société de Médecine de Gand*,' July, 1845. The patient married; but did not become pregnant. Dr. Debrou hence considers that his case is the only one which throws light on the above question.

The ready manner in which conception took place, and the regularity of the pregnancy appears remarkable: 1. Because the long retention of the menstrual fluid, and the operations required to liberate it, might be supposed to unfit the uterus for the development of a fœtus; and 2. Because the tumour formed by the ovary or Fallopian tube on the right side might be imagined to interfere with fecundation.

In the accouchement, there were three circumstances worthy of note: the difficult dilatation of the uterine orifice, the convulsions, and the necessity for the forceps.

In ordinary cases, it may be easy to incise the uterus, but it is not so when the vagina is preternaturally narrow. In Dr. Debrou's case, the incisions were not fully sufficient for this reason. Upon the entire question he decides on the evidence of his own case, that she was rightly advised to marry; and that had she not been weakened by diarrhœa, she might have escaped the convulsions, and not have required instrumental aid. In similar cases, he believes, a woman might be safely delivered.

In reference to the propriety of operating upon females with complete obliteration of the vagina, M. Debrou remarks on the impropriety of the term *absence* of the vagina, which is sometimes used. He prefers the term *imperforation*, to express the absence of an external aperture; *occlusion*, when there is only imperforate hymen; *obliteration*, where the situation of the vagina is occupied by fibrous tissue; and the term *absence* he limits to the condition, in which there is no interval between the rectum and the bladder. These distinctions he considers useful in reference to operating.

The operation for forming an artificial opening in the uterus has been ob-

jected to by Sabatier-Dupuytren, Bégin, and Pigné, on the ground of its being likely to produce metritis. Yet the operation is not necessarily attended with danger; and Barré, Hervez de Chégoin, Wattmann, and Delpech, as well as Dr. Debrou, have performed it without any such bad effects. Dr. Debrou believes, that if the opinion attributed to Dupuytren be fairly examined, he will be found to refer to those cases, where it has been necessary to operate also on an obliterated vagina. It is this, almost entirely, which constitutes the severity of the operation.

Dr. Debrou next offers some remarks on the fact, that he was obliged to make an opening into the uterus a second time.

Excluding those cases in which the os uteri has become closed in pregnant females after conception, and in which it has been necessary to make an artificial opening to render delivery possible, he finds nine cases recorded which throw light on this subject. These he divides into two categories. In the first, including four cases, those of Barré, Hervez de Chégoin, Wattmann, and Delpech, the vagina was of ordinary conformation. In the second, the vagina was more or less obliterated, or even entirely absent. This category includes five cases: one by William de Metz; one by Desgranges; Amussat's case; one by Dr. de Bal; and one by Dr. Kluyskens; Dr. Debrou's case makes a sixth.

Two more questions have to be considered: How long should a foreign body be left in the wound? What means have been used for opening the uterus?

All who have operated, except Delpech and Desgranges, have used a foreign body to prevent cicatrization of the orifice. M. Hervez de Chégoin first introduced a gum elastic sound, and, on the third day, a female catheter, which he kept in nearly two months. Dr. Barré introduced a large gum elastic sound, which he kept in only fifteen days, even taking it out several times, on account of the pain which it produced. M. Delpech left the case to nature; the orifice is said to have remained open, and the menses to have flowed for two periods, after which he lost sight of the patient. Wattmann introduced a leaden canula: it is not stated how long it was retained, but his patient seems to have been cured. William de Metz introduced a plug of charpie; and says that "in a month, the patient was cured;" hence, probably it was not kept in beyond that time. M. Amussat employed sounds for forty-four days, gradually increasing their size; and several times was obliged to suspend their use, on account of the pain occasioned, and because the patient was attacked with peritonitis. Desgranges merely introduced charpie between the *labia majora* and the vagina; but it appears probable, that his case was not one of congenital imperforation, but of incomplete obliteration of the vagina, and occlusion of the os uteri, resulting from syphilitic vegetations and from adhesions following chancre. Dr. de Bal used a gum elastic sound, but for how long he does not say; he merely mentions that the vagina was very small and undilatable. Dr. Kluyskens introduced from time to time a gum elastic canula; the cure was complete at the end of five weeks. Dr. Debrou at first used charpie, then a No. 8 gum elastic sound for thirty-four days, occasionally suspending its use towards the termination.

The instrument employed to make an opening in the uterus has been generally a trocar, a pharyngotome, or some analogous instrument. Three surgeons only,—M. Amussat, Dr. Kluyskens, and Dr. Debrou,—used a bistoury; but they also enlarged the aperture, so that, in Dr. Debrou's case, he could introduce the finger into the uterus.

It hence appears, that neither the method of making the opening, nor of maintaining it, had much effect on the result,—which was persistence of the

orifice, in every case except that of M. Debrou. His failure, he says, must be explained in some other way. We must take into consideration the co-existence of occlusion of the uterus, and complete obliteration of the vagina; the difficulty of keeping open the orifice at the bottom of the newly-formed canal, which itself has a tendency to close, especially at its upper part; and the great importance of restoring the vagina to its natural dimensions,—even greater than keeping open the uterine orifice. Most of those who have operated have been content with making the vagina merely large enough to allow the escape of the menstrual fluid.

Sometimes the vagina is not obliterated at the upper part, and this will diminish the difficulty; for it is the upper part of the vagina which especially tends to contract, and to narrow the new uterine orifice.

Dr. Debrou believes that he arrived at a more complete result than the other operators, and sums up his remarks as follows: “In the first place, the efforts of the surgeon should be directed rather to the restoration of the vagina, than to the establishment of the uterine orifice; because the first object is the more difficult, and much more important. Even though my case has only the merit of showing the difficulties in the way of forming a vagina of sufficient dimensions, I believe that it will still be useful. In my opinion, this point is more important than the other; because, when life is assured by evacuating the uterus, if the orifice made cannot be easily maintained, on account of the contraction of the vaginal canal, it may be left alone until the vagina is restored. When this is once effected, a new incision in the uterus will not be attended by danger, and may easily be rendered permanent.”*

—Three cases of retained menses, from occlusion of the vagina, which have been successfully relieved by operation, are narrated by Dr. MASON WARREN. In two of them, the occlusion was the result of sloughing of the vagina during parturition; the third was congenital.†

4. *Menstruation; its Physiological and Pathological Relations.*—A series of papers on this subject, by Dr. HANNOVER, of Copenhagen, has been translated in the ‘Medical Gazette.’‡ The author sets out with the assumed proof, that an ovum leaves the ovary at each period of heat, and is followed by the formation of a corpus luteum, and that no proof exists of their discharge at any other period. He then alludes to the ascertained fact, that corpora lutea have been found in the human female, and that matured ova have been found in women who have died at the completion of or during menstruation, where no sexual intercourse has occurred. Speaking of Bischoff’s theory of the periodical discharge of ova, he mentions the difficulty arising out of an absence of the discovery of a series of corpora lutea, answering to previous menstrual periods. This was the objection to the theory urged by Meckel, who believed that the discharge of ova was not monthly, but took place at longer and indefinite periods. To this objection the author replies, that Meckel’s observations are inconclusive; and this he proceeds to point out by a critical examination of them. The author, however, confesses our ignorance of the exact chronology of the corpus luteum, and thinks this ignorance a reason why Meckel’s arguments cannot be sustained.

Another objection to Bischoff’s theory is, that it is founded on a conceived analogy between menstruation in women and the rut of animals. This objection also the author shows to be without force.

With regard to the menstrual function, the author states that the uterus is

* London Journal of Medicine, July 1851.

† American Journal of the Medical Sciences, July 1851.

‡ Oct. 10, et seq.

not the real cause, as the menses have been known to flow after extirpation of the uterus, as in a case related by Moss. The determining point is the ovary, as with the removal of these organs, menstruation and the rut both cease. This the author illustrates by examples. In the progress of his essay, Dr. Hannover glances at menstruation during pregnancy; the tenor of his observations being to show that the existence of the sanguineous discharge does not bear so close a ratio to the power of conception as is commonly imagined. He also touches upon a very interesting question on the reciprocal relation of menstruation and disease. The influence of disease on this function is stated to be very similar to the effects of medicines upon it; that is to say, there are some diseases as medicines which seemed to have a certain effect upon the discharge, and others which had none. Among those which especially affect menstruation, he mentions fevers, especially typhus; long convalescence, chronic affections of the heart, and of the sexual organs. Phthisis is also known to influence the functions, but it is not clear, as will be seen by the next article, that the fertility of pregnant women is diminished.

In conclusion, the author makes some practical remarks on the exhibition of medicines during menstruation. In his opinion there is no ground for the prejudice commonly entertained on this point. In reference to the treatment of amenorrhœa, he says, "so long as in certain cases he cannot decide whether the symptoms accompanying this state be owing to the absence of the discharge, or to a disturbance of periodicity, there can be no question of a rational cure, because the symptoms are far from pathognomonic, but are common to many other diseases. Where the symptoms indicate a deficient flow of blood, the chance of success is greater than where they are of a so-called nervous character, or where the cause is exclusively a disturbance of periodicity. Hence arises due want of plans when emmenagogue remedies are exhausted, and hence also the difficulty of predicting with any certainty that the function will be restored. It also often happens that the symptoms from which a patient has suffered for some time, are removed after the use of one medicine or another which has been applied just at the time when the return of the periodical function of the ovary was at hand without our being entitled to ascribe the successful event to the medicine, since in many cases it has not been accompanied by the flow of blood. And in those cases where the symptoms vanish at the appearance of the flow, we must make a distinction between such cases in which the discharge alone has been the restoring moment, and those in which the periodicity has returned, the flow of blood being only an inferior symptom of it. Professor Christensen mentions his having several times seen the menstruation return after one single application of lapis infernalis through the orifice of the uterus, after its having been absent for a long time, even for a year, and that this has had good effect on ulcerations of the mucous membrane of the sexual organs. But he adds, that the lapis infernalis, when too often used, produces a more frequent return, and a longer duration of menstruation, so that the patient is only free from it for about eight days, which is to be taken into serious consideration, because it both weakens the patient, and has a bad influence on the ulcerations. Here the secretion of blood was evidently a merely local discharge from the womb, without being at the same time a sign of the detachment of an ovum. It is with the cure of disorders of menstruation as with the application of anthelmintic medicines; if we were better acquainted with the natural history of intestinal worms, and especially the time and condition of their probable periodical departure from the intestinal canal, we should be able with certainty to follow up a rational cure, and with greater success to calculate upon their removal. We are, however, under our present imperfect knowledge,

obliged either to take refuge in purely empirical means, applying now one, now another, or to be satisfied with the application of such means as only alleviate the apparent symptoms, without giving any positive proof that the disease is at the same time radically cured.

5. *Corpus Luteum; its relations to Pregnancy.* Dr. RAMSBOTHAM has added to his latest edition a chapter on the corpus luteum, illustrated by two beautifully coloured plates. He discusses the question of the dependence of this body upon impregnation, in the following manner. It is perfectly true, he says, that spots of various sizes, shape, colour, and consistence are found in the virgin ovary of females; but this false corpus luteum has, he maintains, so little resemblance to that which follows impregnation, that, with care, the true can always be distinguished. The *real* corpus luteum in the first weeks after conception is round, or bean-shaped, often possessing a cavity either empty, or occupied by extravasated blood. It is vascular, and contains two coats, with a buff-coloured deposit between. One only is ever found at a time. At a more advanced period the cavity is destroyed, and its place is occupied by whitish striated lines. On the contrary, the *spurious* corpora lutea are of all shapes, and cannot be injected; they are destitute of the rich yellow deposit, and several may exist at the same time. Moreover, the perfectly regular central cavity is never seen.

—Dr. ALEXANDER HARVEY also maintains that a *true* corpus luteum is only formed after impregnation, though a false one follows each menstrual oviposit, and gives the following explanation of their different appearances. He observes that,—“when a mature ovum is impregnated, provision is forthwith made to retain it in utero, and both ovum and uterus become the seat of active vital processes, which cause a prolonged determination of blood to the reproductive organs. The ruptured ovisac participates in this afflux, and the organisable deposit which it contains is placed under circumstances favorable to the exercise of its inherent powers of growth, and thus it becomes developed into a true corpus luteum.

“On the other hand, when the ovum is not impregnated, it is thrown off in the menstrual discharge, no prolonged afflux taking place as in the former case: the organisable deposit is not favorably placed for further development, and a *false* corpus luteum is the consequence.”*

6. *Ovarian Tumours, removal of.*—The most remarkable case which has ever been put on record of this nature is one by Dr. PEASLEE, in which both ovaries were successfully excised.

The subject of this operation was a young lady, æt. 25. Dr. Peaslee proceeded in the usual way to remove the tumour by first carefully dissecting through the abdominal parietes. On arriving at the fascia transversalis, it proved to be a very thin layer, and some doubts were entertained as to the dense white membrane which presented itself after its division. Careful dissection was therefore continued, and the membrane was found to be a sac. In the course of this last dissection, a vein was opened, and ten ounces of blood lost. Not above an ounce was lost in dividing the abdominal parietes. The vein in the wall of the sac was tied, and the operation continued.

At this juncture, fifteen minutes were consumed in guarding against the effects of violent vomiting which came on. After the retching had ceased, the hand was introduced, and the sac found to present no adhesions of any moment. The contents of the sac, amounting to twenty-two pounds of

* Monthly Journal of Medical Science, Oct. 1851.

fluid, were now evacuated into a bucket. The pedicle was now reached, tied, and divided.

On making a careful examination of all the parts and organs brought into view, preparatory to closing the incision, a sac of the size of a pullet's egg was discovered on the right ovary, and the whole organ was diseased. Accordingly, a double ligature was passed through the broad ligament, and the ovary removed. The incision was now carefully closed, and the ligatures drawn out through the wound at the nearest point.

The woman made a good recovery. The catamenial discharge appeared seventy-two hours after both ovaries had been removed, and lasted for three days.

This case is accompanied by the following remarks by the author:—

1. The case is *unique*, as far as the successful removal of both ovaries at the same time by the large peritoneal section is concerned. It was also remarkable, from the very slight disturbance of the system. The pulse never rose above 120. Indeed, the patient recovered without a bad symptom.


2. The almost unfailing aid in the diagnosis of ovarian diseases which is afforded by the present advanced state of pathological science, is worthy of remark. It is impossible to form any rational conclusions as to the adhesions or non-adhesions of the sac, without previously evacuating it by tapping.

3. The temperature and hygrometric state of the air in the room at the time of the operation are very important matters. Certainly, the peritoneal surface is *more nearly* in its natural condition when exposed to a *warm and damp* atmosphere, than if the latter be cool or dry, or both. A still higher temperature than 80° would probably be better for the serous membrane; but it could not long be tolerated by the lungs either of the patient or the operator. It was observed that the surface longest exposed became somewhat livid from incipient congestion; and, had even a less protracted exposure to a dry or a cool atmosphere occurred, this effect would probably have been still more marked, and a decided congestion, which is but a single step from inflammation—from peritonitis—might have occurred. Moreover, a sudden change of temperature, even though a slight one, *after* the operation, and whether general or local, is replete with danger. Hence the temperature was kept at 78° to 80°, till all danger of inflammation had disappeared; and the warm water dressing was kept constantly upon the abdomen, as long as any dressing was needed.

That the alimentary canal be also empty and collapsed at the time of the operation, is an important consideration; since thus protrusions are avoided, or easily reduced if they occur. Hence the propriety of a dose of oil thirty-six hours before the operation, and fluid nutriment afterwards.

4. Several difficulties not adverted to, in reports of this operation, occurred. 1st. The skin, being very tense, retracted about three inches when divided, and also drew the next layer (one and a quarter inch thick,) as it was divided, down to an almost level surface; and thus rendered it impossible to keep the precise position of the middle line in the eye, through the whole length of the incision—nine inches. 2d. The fascia transversalis and parietal peritoneum were so atrophied by pressure as not to be recognised as distinct layers either during or after the operation, instead of being thickened as usual. 3d. Violent efforts to vomit, *i. e.*, spasmodic action of the abdominal muscles, have been not unfrequent in other cases; and may not, therefore, in this, have been occasioned by the anæsthetic. 4th. The thickness of the abdominal walls (one and a quarter to one and a half inch) produced much difficulty in coaptating the edges of the incision. Large needles, two and three quarter inches long, were required; they must also be curved, and

therefore annealed; and thus their points were spoiled. Still the latter must be carried through the walls obliquely, so as to pass between the abdominal aponeurosis and the peritoneum, while, at the same time, the former was hardly thicker than stout letter paper, and the latter not certainly recognisable at all. Still the risk of peritonitis was not partially enhanced by the delays thus produced; since they occurred either while the sac still protected the peritoneum, or while the wound was being closed.

5. The pedicles were divided thus,  : the *oblique* lines representing the cut edge, the circle (o) the puncture made by the needle, and the dotted line the level of the ligatures—in order that the loops might *slip off* on applying traction at the proper time, and thus the ligatures be the sooner detached. It appears, however, that only one of them became detached in that way, the rest having been previously *untied*. The one that *slipped*, also, was the last to come away; but the supposition has already been hazarded that it may have left the pedicle, and probably did, some days at least before it was detached. Whether, therefore, this idea as to dividing the pedicle will prove of any practical value, still remains to be decided. And whether the loop usually slips off, or cuts out, or becomes untied, after this operation, is a question previous reports do not enable us to decide, and which we now have under investigation.

6. The success of the operation is to be attributed to the fortitude and confidence of the patient; the comparatively slight adhesions of the diseased mass; the temperature, &c., of the room at the time and subsequently; accurate coaptation of the divided abdominal walls; and the judicious after-treatment. As much care and skill are necessary in closing the incision properly, as in performing the preceding operation.

As to the question whether the operation of ovariectomy is ever justifiable, it is the writer's opinion that, if the patient's general health is rapidly failing (but not already too far prostrated), and the tumour is found to be not extensively adherent, so far as all the known methods, taken *together*, can decide that question, the operation *is* justifiable; *provided* the patient, after fully understanding its nature, strongly desires to have it performed, and has strong hopes of recovery therefrom. But it is an operation never to be urged, nor to be undertaken by an operator whose care does not include the minutest particulars, both prior and subsequent to its performance, which can affect its results.*

—A second successful operation of ovariectomy has been performed by Mr. BEALES, of Halesworth, Suffolk. In this case, the patient was a woman, aged 30, unmarried. The ovarian tumour was hard to the touch in the left iliac region and left hypochondrium, but soft and fluctuating on the opposite side, evidently in two distinct sacs, moveable, and not tender. It was removed on December 4, 1850, about a year after it was first perceived. The incision was ten inches in length, extending from the scrobiculus cordis to the pubes. Two cysts were punctured, and their contents removed, before the tumour could be extracted; the pedicle was tied by a double ligature passed through its base, and the tumour was then separated as near as possible to it. The uterus and right ovary were healthy. Everything went on favorably; on the 15th December she was able to walk about the room; and on the 25th, the ligature came away. The tumour was 3 ft. 2 in. in its largest circumference, and 2 ft. 1½ in. in its smallest; it weighed 25 pounds; it was multilocular, marked on the surface by bands of white fibrous tissue corresponding with the septa of the

* American Journal of the Medical Sciences, April 1851.

cysts. The cysts varied very much in size, and in the density and tenacity of their contents; in the smaller ones, the fluid was clearer and thinner. The average specific gravity was 1010, but the fluid contained a very large quantity of albumen. The total amount of fluid was from 21 to 23 pints.*

7. *Uterus: Abnormal States of, depending upon Syphilis.*—In the volume by Mr. WHITEHEAD† already alluded to, it was stated that among other points strongly insisted upon by him, was the frequent manifestation of constitutional syphilis in a morbid condition of the uterus. We proceed now to lay before our readers the views of the author more in detail.

It is now admitted by many pathologists that a man may transmit the syphilitic poison by sexual contact, long after all sensible traces of the disease have subsided; in other words, that he may transmit constitutional or secondary syphilis, as it is called. This happens, in the author's opinion, through the agency of a contaminated seminal secretion.

The symptom in the female which, according to Mr. Whitehead, is almost invariably present, is a purulent vaginal discharge, of a greenish tint. The energies, both mental and physical, are said to be below the healthy standard, and the countenance is of a leaden or ashy-pale colour, most pronounced in the lower eyelid. The uterine appearances are described as peculiar, and are, by the author, reduced to the following forms: 1st. Hypertrophy, implicating the lower section, or extending upwards to the body, or even involving the whole organ. 2d. Induration, existing partially, or as far as can be ascertained, by touch. 3d. An erythematous surface of a dark red glistening aspect, with many white elevations. 4th. Patchy excoriation. 5th. Aphthous ulceration. 6th. Endo-metritis, with ulceration creeping externally either on one or both labia of the os uteri. 7th. Warty excrescence. On each of these characters the author proceeds to remark:

Concerning the first and second, he says, that they are by no means peculiar to syphilitic affections, but accompany simple inflammatory engorgement; in his own experience, however, the great proportion of such cases were of syphilitic origin.

Of the dark-red, erythematous condition of the uterine neck, he says, that it may be confidently pronounced to be syphilitic, and that the patient will be liable to transmit the taint to her offspring.

When, in addition to enlargement and redness, the lower segment of the uterus presents excoriation, Mr. Whitehead believes that the case is syphilitic, or gonorrhœal, which he, contrary to the best acknowledged opinions, believes to be capable of being transmitted.

An appearance of the os uteri resembling thrush is, as far as the author's observation extends, peculiar to the syphilitic diathesis. A woman so disordered is capable of infecting her offspring.

The sixth condition mentioned occurs under two varieties. The orifice of the uterus is encircled by a deep red inflammatory blush, which terminates abruptly on the labia, and extends up the cervix: the remainder of the os is pale, but the vaginal membrane, when immediately reflected upon it, is of an erythematous redness; from the cervix, exudes a purulent sanies. This condition, the author says, usually supervenes upon gonorrhœa.

The other form of disease is ulceration. When this is covered with a glutinous ash-coloured secretion, primary syphilis is to be suspected; more frequently, the ulcerated surface is simple; if, however, the outline be raised and wavy, and the cervix be variegated in redness, or aphthous, the author considers the woman to be labouring under constitutional syphilis.

* Provincial Journal, &c.

† Op. cit.

Warts are considered as unmistakeable evidence of syphilitic taint.—(pp. 249-58.)

8. *Retroversion of the Unimpregnate Uterus—New Treatment for.*—M. AMUSSAT has recently spoken of a mode of treatment which he has followed with great success. This consists, after reduction of the womb, in causing adhesion of the cervix to the posterior wall of the vagina, by means of caustic. He narrates three cases, in which the symptoms depending upon the displacement were undoubtedly relieved; but it is questionable whether, in the case of subsequent pregnancy, the remedy would not prove as bad as the disease.*

9. *Ossification of the Uterus.*—Occasional instances have been reported of partial conversion of the uterine structures into bone; but we are not aware of any case in which the transformation was so extensive as in the present.

A female died of ascites, at the age of 76. On examination after death, the following remarkable appearances presented themselves:—In the place of the uterus, between the rectum and bladder, there existed a bony substance, the size of a pear, covered by the peritoneum, and terminating in a cartilaginous substance, in the situation of the os and cervix. To either side of the osteoid were attached the broad ligaments and Fallopian tubes. When the substance was divided into halves, a cavity similar to that of the uterus was discovered.†

10. *Uterine Calculus.*—PROFESSOR ANDREA records a case of uterine concretion, probably an ossified fibrous tumour, which he removed by incision of the cervix. The calculus was two and a half inches in length, and four inches in its largest circumference. It weighed over four ounces. Its shape was pyriform; and from its appearances, it was supposed to consist of urates and earthy phosphates.‡

§ II.—*Pregnancy,—Labour,—The Puerperal State.*

11. *Pregnancy, Influence of, on the Progress of Phthisis.*—Observations on the mutual relations of pregnancy and tubercular disease have been noticed in our former volumes. Dr. WALSHE (Abstract, vol. XII, p. 218,) has investigated the fecundity of phthisical subjects; and M. GRISOLLE (Abstract, vol. XI, p. 23,) has written on the influence of pregnancy on the progress of phthisis; concluding, as the result of his inquiries, that the suspending effect of conception on the pulmonary disease, as has hitherto been generally believed, has no foundation in fact. Further observations, however, were necessary to determine the point, and these have, to a certain extent, been supplied by M. Dubreuil.§

In the cases collected by M. Dubreuil, which amount to thirteen, phthisis appeared, or at least was recognised, during the first three months of gestation. Of this number, four women appeared to be in the enjoyment of excellent health at the time of conception, whilst the others had already presented for a greater or less time some symptoms more or less suspicious. Contrary to what would be expected in conformity with the ideas generally

* Revue Médico-Chirurgicale, Oct, 1851.

† Medizinisches Correspondenz Blatt de Wertemberg; and Gazette Médicale, Nov. 7, 1851.

‡ Il Raccogliatore Medico, in Dublin Quarterly Journal, Nov. 1851.

§ Gazette Médicale, Oct. 11, 1851; and Monthly Journal.

prevalent, in all these cases the symptoms, instead of improving, were seen to declare themselves more unequivocally, and the disease made progress. In none of the cases of M. Dubreuil, as in none of the cases formerly collected by M. Grisolle, was the suspending action of the pregnancy observable. On the contrary, it seems to play the part either of a determining cause or of an aggravating circumstance.

According to the reporter, (M. Grisolle,) the cases where the first phenomena of phthisis develop themselves at the beginning of pregnancy, and during a state of health heretofore good, are more common than those where the pregnancy is consecutive to the first symptoms of the organic disease. He has observed that women decidedly phthisical, contrary to what has been said, seldom become pregnant. M. Dubreuil has also observed this circumstance, and, according to M. Delafond, the same is true of the lower animals. The author has, moreover, remarked, that phthisis coexisting with pregnancy does not undergo in the leading symptoms any remarkable modification. This had also been pointed out by M. Grisolle, who had even noticed, in his former researches, that the state of pregnancy did not modify nor render more frequent certain phenomena of the disease, such as dyspnoea and hæmoptysis, as might have been expected.

M. Dubreuil has expressed an opinion relative to the progress of phthisis during pregnancy, in which the reporter does not agree with him,—viz., that, during the later weeks of gestation, there is a sort of interruption of the morbid action. M. Grisolle maintains, that if this does occur in some cases, they are only exceptional. It is rare, according to him, that phthisis, complicated with pregnancy, presents in its progress those intermissions or temporary suspensions which are so common in ordinary tubercular disease. He has invariably seen it make an ascending progress, and become complicated with all the accidents which can occur in the course of phthisis.

The author has also investigated the effects of delivery and of the puerperal state on the progress of phthisis, and he seems to be led to believe that these conditions hasten, oftener than M. Grisolle has stated, the progress of the disease, whatever in other respects be the period of the malady. He thinks that these new conditions can develop phthisis completely, provided the predisposition exists,—or accelerate the fatal termination, when the malady has already declared itself. According to M. Grisolle, that occurs sometimes, but not so often as M. Dubreuil supposes. M. Grisolle adheres to the opinion, that delivery is rather to be wished for than feared; for if some women, already quite exhausted, sink soon after, it is very rare that this happens if the pulmonary disease has not passed the first or second stage. It is, then, more common to see the symptoms improve; there may even be such a suspension of the disease as to lead to the belief that there has been a cure.

M. Dubreuil, wishing to clear up all parts of the question, has investigated the influence which phthisis exerts upon pregnancy, and he agrees with M. Grisolle in remarking, that most phthisical women go to the full term; that the most of them have easy labours, with little pain; and that attempts at nursing always produced deplorable results both to mother and child.

After this analysis of the details, the reporter thus sums up the value of M. Dubreuil's whole memoir:—

The questions which M. Grisolle has propounded are important and practically interesting in the highest degree. He has once more shown that marriage,—that popular remedy for all the ills of young women and for debilitated constitutions,—ought always to awake the anxiety of the physician. Observations now abound to show, that pregnancy, far from being a fortunate

circumstance, is, for women who have either an innate or acquired predisposition, often the determining cause of tubercular disease of the lungs. The coexistence of pregnancy with phthisis, instead of being a fortunate occurrence, as is supposed, increases and hastens the danger. We, therefore, are not entitled, with an author of the last century, to say, that of two women, equally consumptive, she who becomes pregnant will surely live to the end of the period of gestation, whilst the other will die before that time. To be near the truth, the proposition should be reversed. M. Dubreuil, therefore, deserves credit for having helped to destroy an erroneous and dangerous opinion.

12. *Duration of Pregnancy.*—At a recent meeting of the London Medical Society, a paper on this subject was read by Dr. MURPHY. In this paper, two main questions were offered for consideration; viz. Is the duration of pregnancy a fixed or a variable period? and, if it be decided that it is variable, What are the limits of its variation? The usual mode of calculating the term of pregnancy is by dating from the last period of the menses to the time of delivery, the gross results being corrected by deducting as many days as is supposed necessary to avoid error. Some, believing that conception may take place at any time, deduct one half the menstrual interval; while those who consider that conception can only take place at a menstrual period, date either from the last catamenia, or from that which should have happened, but for conception. This estimate being compared with the period of quickening, a result is obtained, sufficiently accurate for ordinary practical purposes, but not precise enough for legal evidence. Other indications have, therefore, been sought for. Peculiar sensations are experienced by some women at the time of conception: some cases of this kind, described by Dr. Montgomery, would tend to fix the duration of the pregnancy at two hundred and eighty days. In other cases, it has been ascertained by the date of a solitary intercourse, which, of course, fixes the date of conception; the same period of two hundred and eighty days is, from such cases, given by Sir C. Clarke and others; and from these facts many are inclined to regard that period as the correct duration of pregnancy. To this opinion, however, Dr. Murphy does not subscribe, as these cases are comparatively few in number, and, if the rule were different, might easily, he thinks, form an exception to it without invalidating it. He therefore calls in the aid of statistics for the solution of the problem; this he commenced some years since, at the University College Hospital, when forming a register of obstetric cases. The following method was adopted:—When a letter for attendance was applied for, an inquiry was made as to the catamenia, the age of the applicant at its commencement, its period, and its last appearance. With regard to the last question, some could only give the month, others were precise as to the date, and some were too irregular to date from. The last were excluded from the inquiry, as, for instance, some who were nursing either had no change, or a very irregular one; others had been always irregular before pregnancy, and therefore could not be depended on; and again, with others, the catamenia had evidently continued after conception: all these were excluded as the others were noted, and when delivery occurred, that also was noted, the interval between the two giving the gross duration of pregnancy, which was afterwards corrected, so as to make as near an approach to accuracy as possible. Of these cases, some time back, a table of 186 was formed. The corrections were made as follows:—If the period exceeded 280 days, and the woman had given the exact date when she was last unwell, the whole menstrual interval was deducted; so, if the whole period were 328 days,

and 28 days were the menstrual interval, 300 days would be regarded as the true duration. It was considered that the woman might be in error, and it was thought safer to suppose that conception occurred just before the catamenia which had been arrested. Subsequently, 280 days were regarded as the true period, and in any cases that exceeded, the menstrual period is deducted, the result being presumed to be accurate. From his records of 965 cases, Dr. Murphy has formed four tables: 1st, those in which the duration of pregnancy exceeded 280 days, including 303 cases; 2d, those that are exactly that period, including 378 cases; 3d, those between 260 and 280 days, including 201 cases; and 4th, those below 260, including 83 cases. The 4th, or last table, he (Dr. Murphy) looks upon as instances of premature labour. From these tables he gathers that the duration of pregnancy is not a fixed, but a variable period, as in the lower animals, varying, however, only within certain limits. Those limits are not yet ascertained. He regards 260 days, or 37 weeks, as the shortest period; he has attended mature infants born at that date. The longest period is yet *sub judice*, the cases in the first table being yet under examination, and requiring correction.*

13. *Anomalous Pregnancy*.—A case is reported by Mr. THOMAS CHURCHILL, in which gestation had proceeded to the full period, without the production of a foetus. The patient, who was the mother of five children, became pregnant in the beginning of June. In September, she was attacked with slight hæmorrhage, which she attributed to a fright. During December, and January 1831, she had a repetition of the flooding, and a still more severe one on the 6th of February, upon which the author was summoned. On examination, the os was found undilated, and by proper treatment the bleeding was checked until the 7th, when it returned, accompanied by labour-pains. The os was now dilated, and placental presentation was ascertained. The membranes were ruptured, and eventually the contents of the uterus were expelled; but, to the author's astonishment, there was no foetus, nor even cord attached to the placenta. On careful examination of the latter, it appeared to be of full size, and perfectly formed. The foetal surface was level, and in place of a funis, the vessels terminated in a round knob. The woman recovered.†

14. *Extra-Uterine Pregnancy*.—The following cases of extra-uterine foetation have been recorded since the date of our last Report.

—A remarkable case, by M. KIVISCH,‡ in which a mature foetus was formed in a female who had been the subject of ovarian conception twelve years previously. The woman, who died of Bright's disease, had borne twins, and subsequently became again pregnant. About the seventh month she suffered from severe uterine hæmorrhage; but, as neither then nor afterwards did labour occur, it was supposed, notwithstanding that foetal movements were felt, that the diagnosis of pregnancy had been erroneous, and the patient was henceforth treated as the subject of an abdominal tumour. It is very remarkable that neither during the development nor after the death of the ovum, were any symptoms of disordered health known to have occurred. At the period of the greatest development of the foetus, the circumference of the abdomen was always less than is usual, and, in the last year of her life, it very much decreased. On examining the body, a tumour was found partly covered by the intestines, but not adherent to them, lying somewhat to the

* Reported in London Journal of Medicine, Nov. 1851. + Medical Times, May 17.

‡ Verhandlungen der Phys. Med. Gesellschaft in Würzburg, and Medical Gazette.

right side, and, being connected with the uterus by the broad ligament, it had the appearance of an enlarged ovary lying freely on the brim of the pelvis. The tumour, when removed entire from the pelvis, presented the following characters:—

Its size was about that of the head of a child of two years of age; it was perfectly round, and was covered with a white, shining membrane, which might have been mistaken for peritoneum, and was on the one side continuous with the broad ligament. On its upper surface was the hypertrophied and flattened Fallopian tube. The fimbriated extremity of the tube was so intimately united to the outer covering of the tumour that it could not be traced, and therefore its abdominal aperture could not be discovered; neither could any communication be traced between the tube and the cavity of the tumour. The upper part of the coats of the tumour were very thin, and, at this part, presented a small bunch of what proved to be finger-bones, protruding through the membrane. The tumour was covered by a smooth, firm, continuous tissue, of the consistence and hardness of a fibrous membrane. In like manner, diverticula of the peritoneum were found, which contained the feet. On the under surface of the tumour was a substance, about two inches in length and about three lines in thickness, which was evidently the altered remains of the ovarium. This body was examined by Drs. Kiwisch and Kölliker; it presented, however, no trace of structure by which its true nature could be determined.

On opening the tumour, the inner surface of the membrane was found firmly adherent, and incorporated with the parts, with which it was in contact, of a compressed fœtus,—*e. g.*, with the right parietal and temporal bones, and with the bones of the foot and hand, which lay most externally. On the surface, at other parts, the membrane was raised, as if in blisters, by a fatty, unctuous substance, which intervened between the fœtus and the tunics of the cyst. Those portions of the fœtal bones which were further removed from the external coats of the tumour, were covered by their own integuments and soft parts: this was seen to be the case with the other portions of the scalp, neck, and upper and lower extremities; but it was impossible to ascertain the condition of its surface, generally, without entirely destroying the preparation, so completely was it folded and compressed upon itself in every direction; and so disfigured was it by this compression, that it was difficult to recognise anything like features. The integuments of the scalp presented fully-formed hair, and the size of the several bones of the skull and of the extremities left no doubt that they belonged to a mature fœtus. On the inner surface of the sac were also to be perceived the remains of a placenta, about the size of a small plate, having on its internal aspect some traces of amnion and umbilical cord.

The uterus was distinctly hypertrophied, particularly in the direction of its length, which was augmented at least to the amount of one third. The other tube was united by adhesions to the ovary and uterus.

—A similar case, of twenty years' duration, has been reported by Dr. Christian, in the 'Philadelphia Medical Examiner.'

—A case of tubal pregnancy, ending in the usual manner by rupture, occurred under the care of Mr. MORLEY, of Barton on Humber. The patient was a servant, and unmarried, who was suddenly seized with acute pain in the abdomen, faintness, and vomiting. She died in rather more than twenty-four hours with all the symptoms of extravasation into the peritoneal cavity. On examination after death Mr. Morley found the viscera of the abdomen concealed by a large coagulum of several pounds weight, together with some pints

of fluid blood in the peritoneal cavity; having removed these, the first object which struck his attention was a male foetus, (between the 5th and 6th month of gestation,) with its head just below the margin of the liver; on tracing the funis he found that it terminated in the placenta, still partly attached to the interior of the parietes of the left fallopian tube, which was rent throughout, nearly the whole of its extent. The uterus was little, if at all enlarged; its cavity lined by the decidua, and the os plugged with mucus.*

15. *Retroversion of the Uterus during Pregnancy.*—We find the following case in the 'Revue Medico-Chirurgicale.'†

A woman, married nine years, was suddenly seized with violent colicky pains in the abdomen in the third month of pregnancy, attended with constipation and difficulty in passing her urine. When visited by M. TESSIER she complained of intense pain, with a feeling of weight in the pelvis, dragging in the groins, and frequent bearing down. On examination per vaginam, M. Tessier felt a tumour at the entrance of the vulva, which filled the vagina, and prevented the passage of the finger behind the pubes without great difficulty. In consequence of a knowledge that her former labours required instrumental aid, he became impressed with the idea, that this tumour was the cause of the obstruction; and considering that the present symptoms indicated a premature confinement, thought it prudent to leave that event to take place. The patient, however, got worse, and M. Garin was called in, who, after some difficulty and perplexity as to diagnosis, recognised a complete retroversion of the uterus, and proceeded at once to replace it, which he accomplished in the usual manner.

16. *Ergot.*—Dr. GEORGE ELY has published some sensible remarks condemnatory of the rash way in which the ergot is often given; and pointing out the circumstances under which it may be legitimately exhibited. To render its use even safe, he observes that there must be no disproportion between the maternal pelvis and foetal head. It should not be given before the os uteri is well dilated, and cannot, therefore, be suitable to the early stages of labour; neither is it to be given unless the soft parts are soft and dilatable, and is, for that reason, inapplicable in primiparous births. The circumstances in which it is really valuable are stated to be those under which a few strong expulsatory efforts will suffice to complete the delivery.

Dr. Ely confirms the observations of Dr. Hardy, that the ergot will sometimes produce very serious depression of the pulse, when the patient has been previously exhausted, as by hæmorrhage or diarrhœa.

As a case in which the ergot is strikingly beneficial, Dr. Ely mentions partial presentation of the placenta. Here, until the os uteri is considerably dilated, the bleeding can only be stayed by the plug; but when the os is open, thin, and yielding, if we rupture the membranes, the descent of the head will so compress the bleeding vessels, as to place the patient in safety. In such a case the author strongly advises the use of a full dose of ergot after rupture of the membranes.‡

17. *Extraction of the Placenta before the Child.*—Dr. RAMSBOTHAM is not an advocate for the practice recommended by Drs. Simpson and Radford, the advantages of which, under appropriate circumstances, have been attested by so many independent observers. (Vide op. cit., p. 403.)

18. *Bandaging after Delivery.*—It will be seen, by a reference to our extracts,

* Prov. Med. and Surg. Journal, June 25, 1851.

† Sept. 1851.

‡ London Journal of Medicine, Nov. 1851.

(Art. 80.) that Mr. KESTIVEN calls in question the utility of the practice of bandaging the abdomen after delivery. The paper in question has called forth several replies, in all of which the utility of the bandage is advocated as a method contributing to the safety of the patient, which ought not to be rejected. Dr. Ramsbotham (op. cit.) does not appear to place much value on it, but regards it more as a means of preserving the figure, than of averting immediate accidents.

19. *The Vectis*.—The relative value of the vectis and the forceps has given rise to much discussion; the chief points of which are succinctly noticed by Dr. Ramsbotham (op. cit., p. 274). The chief arguments in favour of the vectis, as stated by him, are,—*first*, that there is but one blade, which is more easily applied; *secondly*, that extraction can be more easily effected with it; *thirdly*, that, being so easily applied, it is not necessary for the operator to ascertain so intimately the nice obstetrical points connected with the case; or to make himself so minutely acquainted with the position of the head, as when the forceps is used; *fourthly*, that it can be used in cases where the short forceps is perfectly inadmissible, before the head has descended sufficiently low to feel the ear; because we do not guide this instrument over the ear, but introduce it where we can most easily apply it, and can obtain the most useful purchase. On these points he thus enlarges:—

“Each of these arguments deserves a distinct consideration. In the first place, I would readily grant, that the single-bladed vectis can be more easily applied than the double-bladed forceps; but I cannot concede to the proposition, that delivery can be more easily effected with it—at least it is not so in my hands. I am not arrogating too much to myself, when I say that I have had considerable experience in instrumental cases; I can conscientiously affirm, that I entered on practice quite unprejudiced as to the relative merits of the two instruments; and I have found it, in no few instances, easy to finish the labour by means of the forceps, when I had made trial of the vectis without effect. If such has been the case, as I have reason to believe it has, with others as well as myself, of what use is it to boast the easy adaptation of a power which, when properly adjusted, is so inadequate to the end proposed? Again, we are told that, being so much more easily applied than the forceps, it is not necessary that the operator should be so perfectly conversant with obstetrical principles in general, or the particular points of the case under treatment. This, although a very specious, is, in my opinion, the most injudicious and untenable argument which could possibly be addressed in favour of this mode of delivery. To prefer the vectis because it may be worked by a person who knows but little of obstetric principles, is, to say the least of it, placing a dangerous instrument in rash hands, framing an excuse for ignorance, and opening a wide door for violence and injury. I cannot but think that man highly culpable who would attempt to introduce the vectis without knowing minutely the bearings of the case under his care, or who was not sufficiently acquainted with the principles of obstetric science to enable him properly to use the forceps. Such a man would compromise his patient's safety, to say nothing of his own character. The fourth, and last, is the only argument which, with me, carries any weight in support of the vectis. That it can be used in cases where the short forceps is inadmissible, owing to the principal bulk of the head remaining above the pelvic brim; it is a longer instrument, and in its application passes higher within the woman's person than the short forceps, being received somewhat, indeed, into the cavity of the uterus itself; but to overcome the difficulty of such a case, we are in possession of a much more efficient, and, in my opinion, even more safe instrument, in the long

forceps. So that either with the long or short forceps, we may surmount all the impediments to which the vectis is applicable, under vertex presentation.

“Positive Advantages of the Forceps.—Besides these negative advantages, the forceps appears to me positively superior to the vectis in many respects. *First*, when we have applied fully over the ears, we can generally turn the head into that direction most convenient for its exit. It has been already shown, that if the face be coming forward, towards one or the other groin, we may, perhaps, find it necessary to turn it into the hollow of the sacrum before we can accomplish extraction, and that this turn can be accomplished without any great difficulty; but we cannot do this with the vectis—we can only extract the head in that situation under which it is attempting the passage. *Secondly*, we can compress the head with the forceps, and diminish its lateral diameter so as to enable it to escape through a somewhat contracted aperture. It may be answered, that this may be effected with the vectis also; but when the head is compressed between the two blades of the forceps, the pressure is taken off from the mother’s structures; should the vectis, however, be employed, the counter-pressure is made by the bony pelvis itself, and the soft parts lying between the head and the pelvic bones must suffer more or less from contusion. *Thirdly*, we are not so much in danger of injuring the mother, because, with the forceps, we have a fixed fulcrum, and consequently there is no necessity for us to form one for ourselves. To this observation, again, it may be answered, that the vectis should be used as an extractor, and not as a common lever; and that, therefore, our argument is unfair, as being deduced from an abuse of means. In reply, I would observe, that the instrument is so much more easily used as a lever of the first than of the third species, and the fulcrum is so much more naturally made by the bony pelvis than our own hand, that in our anxiety to accomplish one object,—however we may be determined to the contrary,—we run a great risk of transgressing the rule, and endeavouring to *scoop* the head out. It will, of course, be understood that these remarks apply to young operators, and not to experienced practitioners.

“These three principal advantages, then, which the forceps possesses over the vectis—the being able to turn the head in any direction—its producing compression and diminution of bulk, with bruising the soft parts, and the comparative safety with which it may be employed—induce me to use it, and strongly recommend it in preference to the vectis. There are only three cases to which I think the latter instrument more suitable than the forceps; under presentations of the brow, face, or side of the head—the ear for example. In brow-presentations the vectis may sometimes be advantageously used—being passed over the occiput—to bring down the vertex, and prevent the case being converted into a face-presentation; but this is seldom requisite, and can only be effected before impaction has occurred; again, where the face presents, and the head has become impacted in the pelvis, the case is more likely to be easily terminated by the adaptation of the vectis, than by the forceps; and the same remark holds good in regard to the presentations of the side of the head or ear.”*

20. *Puerperal Fever.*—The Obstetrical Society of Edinburgh, among the many topics of interest by which its meetings are distinguished, has recently been the arena of a very instructive debate on the above disease, originating in the reading of a paper by Dr. ARNETH,† on the obstetric practice of the Vienna Hospital. The substance of this paper is as follows:—

* Principles and Practice of Obstetric Medicine and Surgery, by Francis H. Ramsbotham, M.D.

† Monthly Journal of Medical Science, June 1851.

The fearful extent of the mortality from puerperal fever in the Lying-in Hospital, as compared with private practice, was the cause of an inquiry, by a medical commission appointed for the purpose. The first thing that struck their attention, was the far greater mortality in the wards frequented by the students, than in those attended by females studying as midwives; but this was only since 1839, before which time the pupils and midwives attended the same wards: this is shown by tables.

In 1847 Dr. Semelweis, being appointed assistant-physician, lent his best energies to the discovery of the cause of this mortality, and it soon occurred to him that the difference in the mortality of the wards attended by the male and female pupils, respectively, was to be attributed to the fact, that the former were in the daily practice of assisting in autopsies, and frequently went, immediately after, into the obstetrical wards, where they made examinations of the pregnant and parturient women. The result of the idea thus seized upon, was the insisting on the pupils invariably washing their hands in a solution of chloride of lime, prior to any occupations in the wards, a precaution which was immediately followed by the best effects. From this time the mortality diminished sensibly, and became nearly equal in the male and female clinics.

Upon these facts Dr. Arneth remarks, that there can be no doubt that the exciting cause of puerperal fever is the entrance of matters in a state of putrefaction into the system, causing phlebitis and purulent infection. The rigors that prevail as the first symptoms, the dirty yellow discoloration of the skin, the metastatic deposits, are the symptoms of purulent infection; and these are also the signs of the most hopeless cases of puerperal fever. "If (he observes) the disease originated in the vaginal and uterine discharges, there could be no reason why the mortality should have been so much higher in some wards than in others."

Dr. Arneth states, that he knows of no instance in which puerperal fever has been conveyed by the clothes of the attendant; and he also informs us, that he has never observed the association of puerperal fever with erysipelas, which has been noticed in this country.

After the reading of the paper, of which the above is a brief abstract, several members spoke as to their views on the contagious nature of puerperal fever.

Dr. MOIR gave short notes of several epidemics of puerperal fever, after which he narrated the particulars of three cases which had recently occurred in his own practice. He delivered a patient, A, on the 8th of February, at midnight; another, B, on the morning of the 9th; and a third, C, on the afternoon of the 10th. On the evening of the same day, he opened the body of the infant of A, which had died, and found the cavity of the right pleura filled with sero-purulent fluid. The nurse who, we presume, was also present at the post-mortem, was ordered to change her clothes before she approached the mother, and to wash with chloride of lime. Dr. Moir did the same. On the 14th the nurse was feverish, and had inflammation of the lymphatics, having pricked her finger previous to the post-mortem. Dr. Moir afterwards visited A and B, and next day he saw C. On the evening of the 12th, A had rigors, the pulse was very rapid on the 13th and 14th, but fell to 80 on the 15th: she became worse, and died on the 24th. B was seized, early on the 13th, with rigor and violent pain of abdomen, which continued for nearly a fortnight, during which time effusion took place into one pleura, and soon after it into the other; but, though exceedingly prostrated and worn out, she is still (about a month from the attack) alive, and it is hoped may recover. C was also seized with rigor, early on the 13th; pain confined to the uterus, which was hard, and painful on pressure; was leeches over it, and so far

relieved, that on the 15th her pulse was in the morning down to 90, and, soon after mid-day, to 72; yet the symptoms became aggravated, and she died on the 19th.

Dr. Moir called the attention of the members to the great difference of the local symptoms in all the three cases; the pain in C being chiefly confined to the uterus; in B to the peritoneum generally, the whole abdomen being exquisitely tender to the touch; while in A there was neither pain of the abdomen nor of its contents during life, nor morbid appearances after death, with the slight exception already mentioned. And he lastly requested their particular attention to the probable exciting cause in the three cases, or to the manner in which the disease had been communicated; because, believing, as he did, in its contagious nature, it appeared to him a question of great importance to trace out the cause. At first sight, it might appear that the most probable cause was the communication of some morbid matter from the opening of the fœtus, it being admitted that the application of the inflammatory products effused on mucous or serous surfaces may communicate the disease, as amply proved by Dr. Arneth's paper, as already read; but, on more particular attention to the subject, there were several great difficulties in admitting this as the cause in these cases, as all the patients had been delivered *prior* to the opening of the body; as the hands were well cleaned with chloride of lime, and the clothes changed, before *two* of the patients were visited that night, and as the *third* was not seen till next day, and as in none was any vaginal examination made by Dr. Moir *subsequent* to the sectio. Dr. Moir then submitted what to him appeared, on a careful review of all the cases, as the cause. He believed that there must have been some peculiar condition of A's system, which had been not only the cause of the disease discovered in her infant, but also of the subsequent symptoms in her own case, and which had communicated to Dr. Moir some virus or *materies morbi*, which had been the means of inducing the disease in the other two patients. In support of this, there was: 1st, the state of the infant, which was well grown, and in every way healthy, with the exception of the sero-purulent effusion into the right pleura; and that this was dependent on some morbid condition of the mother, was borne out by their being, 2d, for some days previous to labour coming on, a feeling of occasional faintness and of listlessness, very foreign to her usual habits; 3d, by the difference in the nature of the labour, which on former occasions was generally very rapid, and without premonitory symptoms—whereas, on the present occasion, besides supervening a fortnight before her full period, there was a threatening of labour for four days, during the whole of which time Dr. Moir was frequently in attendance on his patient, often for a considerable period at a time; 4th, by the scanty or almost total want of secretion of milk, whereas on all previous occasions it was very abundant; 5th, by the slight rigors, which in attacks of puerperal fever are generally more severe; 6th, by the total want of the usual local pain in the regions of the uterus, its appendages, or the peritoneum; and 7th, the appearances after death. From the preceding facts, Dr. Moir inferred that the disease in this case, A, was the result more of some primary morbid state of the system than connected with any local cause, such as the application of morbid matter to the vagina; that, moreover, this condition had existed prior to delivery, as indicated by the state of the infant, and the symptoms both prior and subsequent to delivery; and lastly, that, as he had been in such close attendance on this patient for four days, he most probably was the means of conveying some infectious matter to B and C, the former of whom was delivered about two hours after he left A's house subsequent to her delivery, and the latter on the next day.

Dr. SIMPSON expressed a similar opinion of Dr. Moir's series of cases to what Dr. Moir himself had given,—viz., that the original focus of contagion in them was to be traced to the diseased blood and tissues of the mother who was first delivered and first attacked;—that her blood had affected the infant which she carried within her;—and that probably the vaginal secretions and discharges from the said patient during labour had unhappily formed the virus or material which had been unwittingly carried by Dr. Moir, so as to affect his other patients. It was only by careful and searching analysis of cases of puerperal fever, like Dr. Moir's, when they did occur, that we could hope ultimately to arrive at a knowledge of all the various ways and means in which the disease may originate or be spread, and consequently of all the different means which may be adopted to prevent its spreading. Dr. Hill of Leuchars has described one instance which was interesting in this respect, that, as in Dr. Moir's, both the mother and the child seemed affected before delivery. A carpenter had his hand wounded and poisoned with the discharge issuing from a dead body whilst placing the corpse in the coffin. A severe attack of erysipelas followed. Subsequently his wife had a similar attack of erysipelas. Their daughter living with them, and in the seventh month of pregnancy, was then taken with an attack of fever. In a day or two, she gave birth to a dead child, whose body had all the appearance of being affected with erysipelas, as the arms of the mother's parents previously were. The mother herself died within twenty-four hours, with the symptoms of malignant puerperal fever. On his road home, from visiting this patient, Dr. Hill was called to a case of labour, and this other was also attacked with puerperal fever. Dr. Arneth's very valuable paper adduced what was apparently incontrovertible evidence of puerperal fever being propagated in the way he suggested,—viz., by medical men carrying on their fingers matter capable of producing it from bodies which they were dissecting, and inadvertently inoculating that matter into the mucous membrane of the vagina of patients in labour. In these cases, the fingers of the accoucheur acted like the ivory points or ivory lancets of the old inoculators and vaccinators,—that is, when once dipped in the poison, they might retain it till they had again inoculated that poison into the bodies of other healthy subjects. The vaginal mucous membrane was generally stretched and abraded in labour, the perineum was often slightly torn, and the whole afforded a surface in a condition easily inoculable. But if students and practitioners, with their hands containing some portions of morbid matter, act thus, by inoculating that matter on the abraded surface of the vagina, produce puerperal fever, no doubt, under similar circumstances, surgeons could and did inoculate into the wounds which they made or dressed, similar matter producing the similar disease of surgical fever in their patients. If it could be inoculated into the abraded surface of the vagina, it could be inoculated into a recent wound. If it produced fever in the one set of patients, it would produce fever in the other. And, since bringing under the attention of the profession the communicability of surgical fever, Dr. Simpson stated that he had heard various facts in regard to it, all of which more and more convinced him that surgeons, like accoucheurs, were occasionally the unhappy media of inoculating their patients with morbid matter, producing in them surgical fever, as in puerperal patients; obstetricians, by the same means, produced, in their patients, puerperal fever. He had no doubt that it would take many long years fully to convince surgeons of this fact; but still it was his conviction that surgeons would ultimately both believe and act upon it, and that their doing so would be a means of preventing many of the numerous deaths which now occur after operations, particularly in hospital surgical practice. The mortality in most lying-in hospitals upon

the Continent of Europe was very much higher than the mortality in the same institutions in Great Britain and Ireland. He did not think that the diminished mortality amongst us was in any way owing to the fact of superiority on our part in obstetric practice, but it was owing to the fact of British accoucheurs generally having a belief in the contagious communicability of puerperal fever, and taking their measures accordingly. He was sincerely of opinion that the want of that belief was a great cause of mortality in the continental lying-in hospitals generally, and that in them many lives were yearly sacrificed to medical prejudice, in the want of a proper belief, on the part of the medical men in charge of them, in the contagious communicability of puerperal fever; and in such a fatal disease it was ever to be recollected that prevention was a far mightier object than cure. Already, by Dr. Semmelweiss' belief in the contagious propagation of puerperal fever, and by the hygienic means which that belief suggested, several hundred maternal lives have, within four years, been saved in the lying-in hospital of Vienna. If one hospital could afford such results in four years, how many maternal lives might be saved over the Continent of Europe, provided all the practitioners of Germany, France, Denmark, &c., could be as thoroughly impressed with the contagious character of puerperal fever as British practitioners and hospital accoucheurs now generally were! Continental accoucheurs generally did not understand exactly the kind or description of evidence upon which British practitioners founded their belief in the contagious communicability of puerperal fever. Some of the continental writers on this subject, he observed, seem to imagine that British obstetricians believed that puerperal fever was usually propagated directly from one patient to another, and, not seeing this occur, when a puerperal fever patient, in their continental hospitals, lay by the side of another healthy woman, they imagine that from this fact they had a disproof of the opinion of the contagious communicability of the disease. But in this country we do not believe that the disease is usually propagated in this way, directly from individual to individual, but indirectly, through the medium of a third person, and that person generally the medical attendant or nurse. But that it was so propagated by the medical attendant or nurse, we further believe upon the following species of evidence,—viz., that it was, as in Dr. Moir's late cases, and in most other instances, distinctly and precisely limited to the practice of one or two practitioners only, out of a large number of medical practitioners, practising in a large community. Many examples were recorded, and many more unrecorded were known to the profession, of the disease being thus limited to the practice of a single practitioner in a town or city; all, or almost all, the patients of that practitioner being affected with it, where none of the patients of other practitioners were seized with any attack of the disease. In these cases we could not believe it to be owing to any morbid influence present in the air, or emanating from the locality in these cities or towns. For, if so, it would affect indiscriminately the patients of all practitioners. But it had been often seen, as it was just now remarked, to haunt the steps of a single practitioner, and a single practitioner only, in a community. Many instances of this were known and published. One would suffice for illustration. Dr. Robertson, of Manchester, tells us that, in 1840, upwards of 400 women were delivered by different midwives in connection with the lying-in hospital in Manchester. These 400 women were delivered in different parts of the town at their own houses: 16 of them died of puerperal fever; all the others made good recoveries. Their production could not have arisen from any general epidemic, or atmospheric, or telluric influence; for the fatal cases occurred in no one particular district, but were scattered through different parts of the town. Now these 400 and odd

women were attended in their confinements by twelve different midwives. Eleven of these twelve midwives had no puerperal fever amongst their patients. The sixteen fatal cases had occurred in the practice of one only of the twelve. The disease in fact was limited entirely to her patients. There must have been something, then, connected with that one midwife, in which she differed from the other midwives, inasmuch as all her patients took the disease, whilst the patients of all the other midwives escaped from it. And in medical philosophy we cannot fancy that this something consisted of aught else than some form of that morbid principle or virus to which pathologists give the name of contagion. Further, that the disease is really in such instances propagated by this third person (the physician or the nurse) carrying to the parturient patients a virus capable of producing the disease, is shown by this kind of additional evidence:—That, when the disease has broken out in the practice of one accoucheur, it will spread to the practice of others of his obstetrical brethren, provided they put themselves in a condition so as to carry off the contagious virus from the patients of the first practitioner. In 1836 or 1837, Mr. Sidey of this city had a rapid succession of five or six fatal cases of puerperal fever in his practice—at the time when the disease was not known to exist in the practice of any other practitioners in this locality. Dr. Simpson, who had then no full and proper belief in the contagious propagation of puerperal fever, attended the dissection of two of Dr. Sidey's patients, and freely handled the diseased parts. The next four cases of midwifery which Dr. Simpson attended were all affected with puerperal fever, and it was the first time that he had seen it in practice. It was upon evidence of this kind that British pathologists generally reckoned in founding their belief on the contagious communicability of puerperal fever. And it was evidence of this kind which had intuitively driven them to adopt those means of prevention or avoidance, which are so highly necessary, in order to arrest the propagation of this fearful malady. The measures proposed and so successfully adopted by Dr. Semmelweiss in the Vienna Hospital were beautiful from their mere simplicity, but they were full also of a great lesson to us all. They proved, in a manner beyond all dispute, the great importance of carefully ridding the fingers from all matters in the least degree likely to prove hurtful, if inoculated into the vagina of a puerperal patient. And no doubt, as Dr. Arneth had remarked, such matters were always present in the fingers as long as, despite even of common ablutions, they emitted a disagreeable animal odour, the presence of that odour being a perfect proof of the presence of morbid matter capable of producing the odour. Drs. Semmelweiss and Arneth recommended, for the purpose of ridding the fingers of this morbid matter, the use of chloride of lime. Dr. Simpson had used for the same object for years daily (or rather generally often during the day) a solution of cyanide of potass, which was more effective even than chloride of lime, and had this other advantage, that it removed readily and at once all such stains as the fingers of the accoucheur were apt to receive in treating uterine diseases—with nitrate of silver, iodine, and the like. Dr. Semmelweiss believed that animal matter, in a state of *putrefaction*, was the material which constituted the inoculable virus capable of being transmitted to puerperal patients, and of producing puerperal fever in these patients. Dr. Simpson had strong doubts as to the idea of this matter being necessarily putrid being correct. We see cases in which animal substances are allowed to putrefy within the vagina, and to be applied to the mucous membrane of that canal, without producing puerperal fever. When a polypus, for example, was ligatured, and left in the vagina, it often was killed and putrefied there for days before the stalk was completely cut through by the applied ligature. And yet in these cases the

patient had little or no liability to attacks of disease like puerperal fever. Besides, in these cases, the other condition is present, of an abraded surface, as well as putrid matter in contact with that surface, for the vagina was sometimes doubtless more or less injured in its mucous surface while passing the ligature; and the ligature itself always made a raw, open, and inoculable surface, as it cut through the pedicle of the tumour. Surgery on other parts of the body admitted of many similar proofs against this doctrine. Dr. Simpson had always believed and taught another theory, but not perhaps a perfectly correct one, in regard to the nature of the contagious material. He believed that generally, if not always, the material which, when carried from one subject to another, could produce puerperal or surgical fever in a newly inoculable subject, was an *inflammatory secretion*, just as the inoculable matter of smallpox, cow-pox, syphilis, &c., was an inflammatory secretion. The case adduced by Dr. Arneth, of puerperal fever breaking out in the hospital apparently in consequence of matter being conveyed from cancer of the uterus to a series of puerperal patients, was not so strong an argument against the view as might at first sight appear. For the cancer patient was, according to Dr. Arneth's own account, several days in labour, the carcinomatous degeneration of the cervix preventing the opening of the os. And there can be very little doubt that, by the end of several days, the carcinomatous structures were in a state of inflammation, and probably gangrenous decomposition, from the protraction of parturition. At all events, if the carcinomatous cervix was really putrid, it was in all likelihood putrid from the result of gangrenous inflammation in its compressed and irritated structures. But, be this the case or not, it was important to remark that obstetricians had now very decided proof of various kinds of morbid matters which were capable, when inoculated into the vagina, of leading on to puerperal fever. For, first of all,—when the bodies of patients who died of puerperal fever were opened, the inflammatory effusions in the abdomen and elsewhere, when brought in contact with the fingers of the accoucheur, were capable of producing the same disease in other healthy patients, upon whom they were accidentally inoculated. In other words, the morbid effusions of puerperal fever in one woman were capable of producing puerperal fever in another woman, when inoculated into her system.—But, secondly, the same seems to hold true with regard to the secretions coming from the bodies of such patients, even when they did not die and were not dissected. Dr. Simpson alluded to the cases, for example, of nurses and midwives, whose fingers came into contact with the discharges from the vagina of puerperal patients, giving the disease to other parturient women, and who had not, of course, in the way of post-mortem examinations, been bringing their fingers in contact with the more internal secretions. Dr. Gordon mentions more than one case of this kind in relation to midwives, in his history of the Aberdeen puerperal epidemic.—Thirdly, he believed that the cases recorded by the late Mr. Storrs, Hutchinson, Ingleby, and others, sufficiently proved that the inflammatory secretions in some other inflammatory diseases besides puerperal fever, when carried by the medical attendant, and inoculated into the maternal canals of a parturient female, were sometimes capable of producing in such females true puerperal fever. This seemed more particularly true with regard to the inflammatory effusions in erysipelas and gangrenous inflammation of the limbs, scrotum, vulva, or other part of the body. That the morbid matters thrown out in those more subacute forms of disseminated or phlebitic inflammation, which sometimes occur after delivery, were capable of producing puerperal fever when inoculated into puerperal patients, was a fact of some importance to hold in view. And the following recent case will perhaps impress the truth of

it. A short time ago, Dr. Simpson was requested to see a case of pelvic abscess in a patient delivered from four to five weeks previously. The abscess was artificially evacuated, but only with partial relief; as there were evidently other local inflammations going on, both in the abdomen and chest. The patient died about six or seven days after delivery. The practitioner who originally attended her, and who had no puerperal fever cases in his practice, was not able to be present at the dissection. Another able medical practitioner—whom he had called to the case after the inflammatory attack had begun—opened the body. Though an excellent and well-informed physician, he rather decried any fear about the possibility of contagion, when Dr. Simpson suggested it to him as he came into the room, and found him opening the body. This gentleman had no puerperal fever case in his own practice; but within fifty hours after opening this body, he happened to be called to five cases of midwifery. Four of these patients were attacked with puerperal fever, three in a very severe, and one in a mild or abortive form. The fifth patient altogether escaped, the child having been born before the practitioner's arrival.—Fourthly, there were one or two recorded circumstances which would lead one to the belief that some varieties of febrile exhalations, received by inhalation into the blood of a newly-delivered woman, are capable of producing in her a disease analogous to, if not identical with, puerperal fever, the effect being the same as if morbid matter had been introduced into her blood, not by inhalation into her lungs, but by inoculation and imbibition into the vagina, just as in the spreading of smallpox we see the disease liable to be produced in two ways—first, by the direct inoculation of the morbid inflammatory matter contained in pustules on the arm of a healthy individual; or secondly, by persons inhaling the morbid effluvia from the bodies of patients labouring under the disease, without being inoculated into them.—Dr. Collins mentions an instance in which a patient was admitted into the Dublin Lying-in Hospital, labouring under a bad form of typhus fever. Two puerperal females, who occupied the adjoining beds, were attacked with puerperal fever, and died. In another instance, in the same hospital, a similar accident happened. A patient labouring under typhus fever was admitted into one of the small wards of the house, which contained only some four beds,—all the three other women were attacked with puerperal fever, and two of them died. But we had no very decided evidence, as far as Dr. Simpson knew, from hospital observation, that a woman labouring under puerperal fever could, by the exhalations from her body, infect with the same disease other patients lying near her in the same ward.—Fifthly, some accoucheurs believe in the possibility of the imbibition of the effluvia from typhus or puerperal fever patients by the clothes of the medical attendant, and that the subsequent inhalation of such matter by the parturient female might be a means of artificially infecting that female with the disease. Dr. Simpson could not doubt that the saturation of the bed-clothes, &c., with the discharges of a puerperal fever patient, might give the same disease to another puerperal patient who was laid in them. This, and one or two other circumstances, were enough to show that, for safety's sake, it was always well to act upon the possibility of the clothes even of the medical attendant being thus a medium of contagion. In some observations on the subject of the contagion of puerperal fever, Dr. Merriman states, that he once attended the dissection of a puerperal patient, but did not touch the body, or any of the parts. The same evening he attended a lady in labour, and she was attacked with the disease. In his account of the Aberdeen fever, Dr. Gordon mentions that a man-servant appeared to carry the infection of the disease from his sister in Aberdeen to his wife in the parish of Fintry, six miles from Aberdeen. The midwife who attended this woman infected two other

parturient patients in the same parish, soon afterwards, both of whom died. If a statement of this kind could be established as a fact, by careful analysis of the requisite evidence, it would be a matter of importance, as adding to our knowledge of the modes in which this disease may be propagated. In the instance which Dr. Moir had mentioned, of Dr. Hamilton visiting the patient of another practitioner affected with puerperal fever, and immediately after having several cases in his own practice, it was not at all unlikely that he had made some examination of the patient, or, at all events, without proof that he had not, it would not be proper to conclude that the disease, in that instance, could be carried by the clothes of the physician acting in the way of *fomites*. Dr. Simpson had also been informed of an instance, by Professor Patterson, in which a medical gentleman, after having lost several cases of puerperal fever, got rid of the disease in his practice by changing his clothes, and using chloride of lime, &c., but it again returned to him when he happened to deliver a patient immediately after wearing a pair of gloves which he had used during the time of the puerperal epidemic; and certainly, if there was any piece of dress more apt to retain the contagion than another, it was this useless and superfluous appendage to our attire; for it might retain the morbid secretions that were originally on the fingers of the accoucheur, just as our vaccinating glasses would retain the cowpox matter. Again, in a small ward or small hospital, one could almost, as it were, produce puerperal fever at will, by crowding a great number of puerperal patients together in the same ill-ventilated room. The discharges from the different patients, in a few days render the air of such a room so loaded and morbid, as to be oppressive to all entering it, and capable of producing febrile action by the inspiration of it, in those puerperal patients who occupied its beds. This, no doubt, was true when this experiment was driven, as it sometimes accidentally had been, to an extreme. But it was true, also, in its lesser degree; for Dr. Simpson believed that one great cause of weed, ephemera, and febrile attacks during puerperal convalescence, was the still too slight attention that was paid to the ventilation of the lying-in chamber. He had repeatedly, he thought, seen more or less slight febrile action set up in a patient, from her curtains being closely drawn around her bed for eight or ten hours during the night, being thus obliged to breathe an air loaded and affected with the morbid animal discharges from her own body. Dr. Arnet had not alluded to the question,—Whether the disease was ever caused or not, or a predisposition at least given to it, by epidemic influence? Dr. Simpson believed that we ought not to forget altogether the possibility of epidemic influences acting, directly or indirectly, in the causation of it. During the present century, the disease had nearly, in two or three instances, as in 1819-20 and 1829, prevailed in most of the cities and lying-in hospitals of Europe. And it was difficult, or impossible, to account for this simultaneous existence everywhere, without believing that everywhere there was some general epidemic cause tending to its production. In this, the history of puerperal fever did not differ from the history of other contagious febrile diseases. During the latter part of the last century, for instance, smallpox contagion existed in almost every town and village in England, because, in almost every one of them, there were artificial causes operating to produce and perpetuate the disease, inoculation being very generally practised. But it was only in particular years, and sometimes at a considerable distance of time, that the disease became epidemic. And when it did so, it was owing to other causes being in action in addition to the mere inoculation. Nay, more, in some conditions, as during the blowing of the Harmattan wind, we know that smallpox and cowpox cannot be propagated even by direct inoculation,—facts showing us the influence of epidemic con-

stitutions in effecting a greater or less tendency to the production and spread of particular diseases. One predisposing cause to attacks of puerperal fever was, no doubt, the state of the constitution of the patient immediately after delivery. Dr. Collins's cases in the Dublin Hospital showed, not only that the disease was far more apt to attack those who were worn out by long labours than those women who had escaped with parturitions short in their duration, but also that the malady, when it did appear, was much more fatal in the former than in the latter class of patients. The Society was aware that it had been proposed, by various pathologists of late years, to give various prophylactic medicines to puerperal patients after delivery, and to surgical patients after operations, in order to prevent the attacks of puerperal or surgical fever. All these measures, such as sulphate of quinine, muriate of iron, &c., had the object in view of strengthening the constitution of those to whom they were exhibited, so as to diminish or destroy the predisposition to these febrile attacks. And we could understand their proposed mode of action, when we reflected upon the fact that a predisposition to such attacks was given by any unusual degree of exhaustion or debility in the patient. Every patient exposed to the contagion, and even to the inoculation, of small-pox, for example, did not take small-pox. There were other means by which the predisposition to that disease was reduced or removed, than by previous variolation or previous vaccination. And perhaps, particularly, or otherwise, by medicine, we may be able to reduce or remove the predisposition to puerperal fever, as well as to scarlatina, measles, &c. Lastly, Dr. Simpson observed, no doubt, sporadic cases of puerperal fever did, and were from time to time occurring, traceable to no contagion, or any other cause capable of being averted; but owing, as in Dr. Moir's first case, to morbid actions going on in the constitution of the patient even before delivery; or to morbid agencies capable, under other circumstances, of producing fever or inflammation acting upon the patient in delivery. Dr. Arneth had particularly called the attention of the Society to the connection which was generally believed by British accoucheurs to exist between erysipelas and puerperal fever; and he had stated that the relation between these two diseases had not been observed in Vienna. Dr. Simpson, however, expressed his opinion, that now that Dr. Arneth's attention had been directed to it, he and his compatriots would find such relations existing between these two diseases, which English accoucheurs spoke of. Dr. Simpson had long believed and taught that there was a pathological connection between the two diseases in question, as to their pathological nature, their pathological anatomy, their symptomatology, and their causation. The two diseases had in Britain been repeatedly observed to prevail at the same time, in the same town, in the same hospital, or even in the same wards. There were various accurately recorded instances in our British journals, which he had already alluded to as showing this—that when the fingers of medical men were impregnated with the morbid secretions thrown out in erysipelatous inflammation, the inoculation of these matters into the genital canals of our parturient females produced puerperal fever in them in the same way as the inoculation of the secretions from patients who had died of puerperal fever itself. The effused morbid matters in the one disease, as in the other, were capable of producing the same effect when introduced into the vagina of a puerperal patient. Of this connection Dr. Simpson proceeded to relate several remarkable examples.

Whilst thus arguing for some pathological connection between erysipelas and puerperal fever, Dr. Simpson further stated that, though in a few cases patients labouring under puerperal fever had been attacked with erysipelas of the skin and cellular tissues—and, on the other hand, patients who were

delivered when suffering under erysipelas were sometimes subsequently attacked with puerperal fever—yet these results were not always observed. He alluded to cases where erysipelas had attacked women before delivery, but was not followed by puerperal fever. And he had seen more than one patient labouring under puerperal fever have inflammation of the skin, but that of a pustular type, like ecthyma, and not of an erysipelatous character. In stating this, he wished to express his belief that the diseases were not in all respects pathologically identical, though the morbid secretions in the one were capable of producing, in those predisposed to it, the other disease—erysipelatous effusions producing puerperal fever, and puerperal fever secretions producing erysipelas. Other febrile and inflammatory products, besides those of puerperal fever, when inhaled through the lungs into the blood, or inoculated into the blood through the vagina, may, as already stated, probably produce puerperal fever in addition to those we have principally spoken of, viz., the secretions from puerperal fever and erysipelatous patients.

—Dr. PEDDIE said, that he had given a good deal of attention to the subject of puerperal fever, from the occurrence of some cases in his practice, upwards of five years ago; and he quite agreed with Dr. Arneth in his excellent remarks on the danger of obstetrical manipulation, after being recently engaged in *post-mortem* examinations. That, he thought, was now a pretty generally admitted opinion in this country. Dr. Robert Lee of London, Dr. Merriman, and others, had, many years since, mentioned cases in proof of this source of danger; and, of late, accoucheurs in this city had exercised much caution. To point out still more strongly the risk of accoucheurs handling morbid preparations, he would notice what he believed to be a fact, that the series of puerperal fever cases which Dr. Simpson had mentioned as occurring in his practice some years since, from assisting at an autopsy of one of Dr. Sidey's puerperal cases, did not end there, but that a practitioner in Leith, having examined, in Dr. Simpson's home, a portion of the uterus obtained on that occasion, had immediately thereafter three fatal cases of the fever in his own practice. With regard to the power of the solution of the chloride of lime as a disinfecting wash for the hands of those engaged in midwifery practice, Dr. Peddie had no doubt; and in that belief he had personally used it much. Dr. Peddie finally recapitulated his own cases of puerperal fever, noticed by us in a former volume. (IV, 315.)

[We have devoted more space than usual to the subject of puerperal fever, and have reported the observations of the different speakers in this debate with but little condensation; but we consider the question of the contagious nature of puerperal fever and its alliances with other diseases so important, that we feel confident that our pages cannot be more usefully employed than in impressing upon our readers the facts above related.—ED.]

21. *Placenta—Fatty Degeneration of.*—An elaborate Memoir on Fatty Degeneration of the Placenta, and its Influence on Parturition and the Viability of the Fœtus, has been published in the 'Medico-Chirurgical Transactions,'* by Dr. BARNES.

The author commences by relating two cases of premature delivery at the seventh month. In the first, flooding occurred twice without obvious cause, and unaccompanied by pain, at the third month, and again at the seventh month, when labour followed. In the second case there was no hæmorrhage previous to delivery. In both cases death of the child had occurred some time previous to delivery. In both cases the placenta was studded with fatty masses, apparently isolated from the surrounding structure: these masses were

* Vol. xxxvi.

firm, yellowish-white, and bloodless. On careful dissection, it was obvious that the diseased and apparently healthy portions of the placenta were continuous, and that the fatty masses were the result of fatty deposit or degeneration in the proper placental structure. In one case, branches of the umbilical vessels in an atrophied condition were traced through several of the fatty masses. In the examination of the minute structure of the altered parts, the author had availed himself of the assistance of Dr. Hassall. The following conclusions had been arrived at:—The placental villi were thickly studded with innumerable minute spherules of oil. The chorion was much altered, thickened, destitute of nuclei, of a yellow colour, and more or less broken and detached from the vessels. The umbilical capillaries no longer presented nuclei in their walls, these being replaced by spherules of oil. The spherules of oil were contained, some in the chorion, others in the walls of the blood-vessels, many in the intervals or spaces between these. The cavities of the vessels were almost exclusively free from fatty deposition. The vessels were destitute of blood. In some parts the process had extended to complete disintegration of original structure. In those parts that, to the naked eye, appeared healthy, evidences of fatty deposit and degeneration being in progress were observed. A number of specimens of sound placenta had been examined, and the occurrence of a certain proportion of oil as a normal constituent had been determined. The author regards the fact of the occurrence of this change of structure in the placenta as highly interesting, both to the pathologist and to the obstetric practitioner, and likely to throw light on the disputed question to hereditary transmission of predisposition to fatty degeneration. It shows how rapidly such change of living structures may take place. The conversion of portions of placenta into solid unyielding structure, and the consequent imperfect attachment of these portions, and of the surrounding healthy structure, to the womb, may give rise to hæmorrhage, and premature labour may occur possibly during the life of the child. A more frequent occurrence, probably, is the destruction of the fœtus in consequence of imperfect nutrition, and by a process of slow asphyxia. Fatty degeneration may also cause abortion in the early periods, the ovum being affected. With reference to treatment, it was suggested, whether the known disposition to this destructive change, if established by the observation of preceding pregnancies, might not warrant the induction of premature labour, with the view of anticipating the period at which the fœtus would almost certainly be destroyed if left in the womb. Some suggestions were also offered with reference to the general treatment to be adopted with a view of counteracting the disposition to fatty degeneration before and during pregnancy. The paper concluded with the expression of the hope entertained by the author, that his account of the process of fatty degeneration in the placenta would be accepted as a useful contribution in extending the knowledge of an important subject in general pathology, and in directing attention to a source of danger to mother and offspring comparatively unnoticed in obstetric practice.

§ III.—*Diseases of Children.*

22. *Congenital Syphilis.*—The transmission of the venereal poison from the parent to the offspring, has lately attracted much attention, having been made the subject of a lengthened debate before the “Académie de Médecine” of Paris. The discussion arose upon a memoir by M. DEPAUL describing a peculiar disease of the foetal lungs, which he attributed to the syphilitic poison, and

which in one or two instances was accompanied by bullar eruptions resembling pemphigus. This memoir was reported on by M. Cazeaux, who disputed the venereal origin of the pulmonary lesions in question, and stated his opinion that as constitutional syphilis rarely showed itself before the second and third week after birth, the vesicular reception existing at birth was of doubtful origin.

M. Ricord, a great authority on these matters, does not disbelieve in a syphilitic variety of pemphigus, inasmuch as all cutaneous affections have their syphilitic representatives; and the reality of the disease was also attested by M. Paul Dubois, who gave a minute description of its phenomena.

—A large collection of facts bearing upon the hereditary transmission of syphilis are assembled in Mr. WHITEHEAD's volume before mentioned,* from which he arrives at the conclusion that the poison may be transmitted to the offspring long after the outward manifestation of it has ceased in the parent, and, likewise, that the secondary form may be communicated from the nurse to the infant, and *vice versa*.

The forms under which infantile syphilis shows itself are stated by Mr. Whitehead to be of seven varieties:—1st, exanthemata; 2d, squamæ; 3d, papulæ; 4th, tubercular; 5th, pustulæ; 6th, vesiculæ; 7th, pemphigus.

Of these the first is liable to appear at the end of the first week after birth, and attacks most commonly the face and breech. The eruption is commonly attended after a time with disorder of the mucous membrane, which is, for the most part, the immediate cause of death.

Of the squamous eruption, the leprous variety commences as small patches on the cheeks, hands, and feet, which take on a serpiginous aspect. The author regards this as one of the clearest manifestations of the poison.

Psoriasis occurring in the infant is also, he says, almost invariably syphilitic.

The author has met the tubercular eruption under four distinct forms. Of these, the first is the flat tubercle, which is very common, generally occupying the face and nates, as a flat shining blotch, of a coppery hue, elevated above the surface.

Another variety, common in infancy, is a tubercular elevation, which first appears at the angle of the mouth, or ala of the nose. The perforating tubercle is a more severe form, appearing after the child has been worn out by other syphilitic phenomena.

A fourth variety of tubercular disease is one which the author has witnessed at birth in one instance only: "they were the size of peas, hard, of a purple colour, and equally distributed over the body."

Of pemphigus, the author states, that it is probable that some of the cases of desquamation of the cuticle seen in still-born infants, are the result of intra-uterine pemphigus. When the disease exists at birth, he informs us that it may be looked upon as likely soon to end fatally. This form of disease in the infant generally occurs in the instance of mothers who have had the primary disease during pregnancy, as also in others who possess the hæmorrhagic diathesis. Allied to this form of disease, is an inflammatory affection of the genital mucous membrane, which is rapidly followed by sloughing. (Op. cit., p. 280.)

23. *Local Paralysis in the New-born Infant*.—M. DANYAU has reported the examination of an infant, which throws some light on the paralysis of the face and upper extremities, occasionally, but rarely, seen at birth, and the result of compression, as supposed by Smellie, by whom a single case is given. The

* Op. cit., p. 234.

infant alluded to by M. Danyau was apparently still-born, but was restored after some trouble. It was soon observed to have paralysis of the left side of the face and of the left arm, which dangled motionless at its side. On examining the left side of the neck, M. Danyau observed a scar, which was evidently the result of the blade of the forceps. The child died, when it was found that the brachial plexus was surrounded with ecchymosis and serous exudation. He therefore concluded, that the paralysis of the arm, as well as of the face, had been caused by injury to the nerves, through the compression exercised by the forceps during delivery.

24. *Compression of the Cranium during Birth.*—Dr. OGIER WARD read a paper on this subject to the Royal Medical and Chirurgical Society. The immediate of which was to draw attention to the compression of the bones of the skull during parturition, and the influence which this exerted on the after condition of the child, whether physical or mental. After stating that he distinguished the deformity produced by its situation, and the bone or bones more immediately implicated in the abnormal condition, he proceeded to enumerate the immediate and remote consequences of the pressure. These consisted of symptoms of imperfect cerebral development and its consequences, together with a train of dyspeptic symptoms, of which flatulence was the most prominent. He also considered that epileptic convulsions and paralysis might result from the same cause. After referring to the influence which Foville attributed to the strange head-dress of the children in Normandy in the production of insanity, the author threw out the hint that compression exerted on the head during parturition might have a similar effect. With respect to the treatment of the effects of compression, the author recommends, that when the child is born asphyxiated, free inspiration should be established as quickly as possible; and to effect this, he advises that the child should be made to cry by birching it with a single twig, &c.; he states the bones of the head may be seen to expand immediately that free inspiration is established. He considered that manipulation of the bones of the head was of no service in these cases, unless the whole head was affected. The paralysis and other results which he had enumerated, were to be treated in the usual manner, regard always being had to the immediate and peculiar cause of the affection. In the discussion which ensued, the questions mooted had reference chiefly to one point in the paper. Did the pressure exerted on the head by parturition really have such effects as those described? On one side it was contended that such pressure was injurious in the manner described by the author; and cases were related in point to show that such was the fact; in these cases, convulsions, and other disorders of the nervous system, were present. The experience of Foville also was alluded to with regard to the compression which was exerted by the Norman cap on the heads of children. Two fingers could be put into the indentation so produced. Foville had regarded this as a frequent cause of mania. It was asked, whether the pressure on the head of the Carib had any influence in the production of mental disease? On the opposite side, however, cases were referred to, in which deformities existed similar to those described in the paper, but the children so affected had no sign or symptoms of disease about them, and the distorted parts became quite restored without interference. In support of the opposition to Dr. Ward's conclusion, the condition of the child's head after delivery was referred to. Frequently after difficult or protracted labours, the heads were of all shapes, and yet how quickly, by the efforts of Nature, did the heads assume their proper form! Even large extravasations of blood were removed in an incredibly short space of time.*

* Lancet, March 15, 1851.

25. *Prococious Sexual Appetite in a Child Five Years Old.*—Although the effects of the destructive habits of masturbation are generally recognised in the adult, medical men are not prepared to find this vicious indulgence in young children, and are apt, on this account, to be misled in certain instances of failing health in little children, especially of the female sex. Dr. HAINES relates a case in which this habit was carried on to a frightful extent in a child five years of age, and continued in spite of every kind of treatment, medical and moral, including seclusion in an asylum with the most assiduous watching.

OUR RELATIONS WITH HOMŒOPATHY AND OTHER FORMS OF IRREGULAR PRACTICE.

[THE extent to which homœopathic impostures have been carried, and the temptations held out by it to the unscrupulous or unsuccessful medical practitioner, has at length roused the profession throughout the length and breadth of the land; and as a result we find several influential societies have determined upon a line of conduct likely to redound at once to their own dignity, and to do much to save the public from the evil consequences of combined ignorance and fraud. Foremost in the good fight has been the Provincial Medical and Surgical Association of England, which passed the following resolutions at the last Anniversary Meeting:]

PROVINCIAL MEDICAL AND SURGICAL ASSOCIATION.

Report on Irregular Practice.

Your committee have, after consultation with numerous members of the Association, maturely considered the subject referred to them, and beg respectfully to suggest the adoption of the following resolutions:—

1. That it is the opinion of this association that homœopathy, as propounded by Hahnemann and practised by his followers, is so utterly opposed to science and common sense, as well as so completely at variance with the experience of the medical profession, that it ought to be in no way or degree practised or countenanced by any regularly educated medical practitioner.

2. That homœopathic practitioners, through the press, the platform, and the pulpit, have endeavoured to heap contempt upon the practice of medicine and surgery as followed by members of this association, and by the profession at large.

3. That for these reasons it is derogatory to the honour of members of this association to hold any kind of professional intercourse with homœopathic practitioners.

4. That there are three classes of practitioners who ought not to be members of this association—viz., 1st, real homœopathic practitioners; 2d, those who practise homœopathy in combination with other systems of treatment; and 3d, those who under various pretences meet in consultation, or hold professional intercourse with those who practise homœopathy.

5. That a committee of seven be appointed to frame laws in accordance with these resolutions, to be submitted to the next annual meeting of the association.

6. That the thanks of the association are eminently due, and are hereby given, to the presidents and fellows of the Royal Colleges of Physicians and Surgeons of Edinburgh for their determined stand against homœopathic delusions and impostures.

7. That the thanks of the association are also due, and are hereby given, to the Universities of Edinburgh and St. Andrew's for their resolution to refuse their diplomas to practitioners of homœopathy; but the association

feels imperatively called on to express its disapproval of any school of medicine which retains among its teachers any one who holds homœopathic opinions.

8. That these resolutions be printed, and transmitted to all the medical licensing bodies and medical schools in the United Kingdom; and that they likewise be inserted in the 'Times' newspaper, the 'Morning Post,' the 'North British Advertiser,' 'Saunders's News-Letter,' all the British and Irish medical periodicals, and in such other journals as the council may sanction upon the recommendation of the branch associations.

In proposing these resolutions for the adoption of the association, your committee are anxious to state that they are actuated by a strong sense of the importance of the subject in its relation both to humanity and morals. They most conscientiously believe that the countenance afforded to the form of charlatantry herein alluded to is detrimental to the true interests of the public, as it is subversive of that strict integrity which ought to characterise practitioners of medicine, and which has ever distinguished the profession in these kingdoms.

J. R. CORMACK, M.D., F.R.C.P.E.

J. TUNSTALL, M.D.

W. H. RANKING, M.D.

[The Medico-Ethical Society of Manchester, has appealed to the Royal College of Surgeons of England, calling upon them to exercise their powers in removing from the list of members the names of those members who practice homœopathy. *This the College has deemed it inexpedient to do.*]

To the Council of the Royal College of Surgeons of England.

The Memorial of the Medico-Ethical Association of Manchester

Respectfully sheweth,—That a large majority of your memorialists possess the diplomas of your college, either as fellows or members.

That your memorialists have learned that upwards of fifty members of the college are engaged in the practice of homœopathy in London and the provinces, and that the number is on the increase.

That your memorialists also regret that there are practitioners, who, for the most part, are entitled to the highest respect of their fellows, but who, under some distorted notions of propriety, have become the abettors of this apostasy on the ground of diagnosis.

That your memorialists, since the formation of their association, have been restrained by one of its by-laws from all professional intercourse with homœopathic practitioners.

That while your memorialists would emphatically commend the passive resistance which the medical profession has hitherto offered to this system of imposture and delusion, they believe the time has now arrived when the dignity of the college to which they belong must be vindicated, and the honour of its members shall cease to be degraded by ignominious associates.

That your memorialists are encouraged to press this subject on the attention of the council, by the fact that the Royal College of Physicians of Edinburgh, in a resolution recently adopted, "expresses an earnest hope that those fellows, seeing they have virtually separated themselves from the college, will spontaneously sever their further connection with an institution that repudiates them, and from which they can derive, as merely nominal fellows, nothing else than a false position and a spurious credit."

That your memorialists would suggest that, in imitation of this resolution,

the council exercise the power conferred by clause 3, section 20, of the by-laws of the college, of removing from the list of members any person who has rendered himself disgraceful to the college; and that the council also protest against the unworthy association of scientific practitioners with homœopathists on the fallacious ground of diagnosis.

That your memorialists will ever aid in upholding the ethics of a college whose honour and dignity are outraged, and whose members are insulted.

JAMES L. BARDSLEY, M.D., President.
JOHN AIKENHEAD, M.D. } Hon. Secs.
W. C. WILLIAMSON, }

Manchester, Sept. 3, 1851.

[The practitioners of Guernsey, with a spirit worthy of imitation, have addressed the following letter to the committee on irregular practice appointed by the Provincial Medical and Surgical Association.]

To the Committee on Irregular Practice of the Provincial Medical and Surgical Association.

Guernsey, Sept. 10, 1851.

Gentlemen,—We, the undersigned, medical practitioners of the Island of Guernsey, beg to offer our warm congratulations, and sincere thanks, to the Provincial Medical and Surgical Association in general, and to you as their committee in particular, for the manly and straightforward resolutions unanimously adopted at a meeting of that body, held at Brighton on the 14th ultimo.

We likewise desire to express our cordial approval of the uncompromising tone of the speeches delivered on that occasion, when, in our humble opinion, the principles of truth, honesty, and morality, were elucidated, the science of medicine vindicated, and the injurious tendency of homœopathy—its hollowness, absurdity, and dishonesty—demonstrated by clear, comprehensive, and irrefragable facts.

We would fain hope that the dignified manner in which the association has responded to the movement of the Universities of Edinburgh and St. Andrew's, to expose and discard homœopaths, will be followed by the English and Irish Colleges, and thus enable Great Britain to set as bright an example in checking error, and upholding truth in medicine, as she has recently done in religion.

We derive additional satisfaction in addressing the Provincial Medical and Surgical Association, from having throughout firmly, advisedly, and conscientiously resisted all attempts to induce us to hold intercourse with homœopathic practitioners, or to countenance a system the offspring of quackery, the refuge of imposture, and the nursling of dupes.

We now calmly wait the course of events, satisfied that truth and honesty will prevail, and that homœopaths who seek to be considered as regular practitioners, and pertinaciously shelter themselves under the ægis of medical institutions, will ultimately be exposed and repudiated.

We have the honour to be, Gentlemen,

Your obedient Servants,

JOHN MAUGER, M.R.C.S., Eng.
J. ELLIOT HOSKINS, M.D., F.R.S.
M. MAYGARTH BRESH, R.N.
DE BEAUVOIR DE LISLE, M.D., &c.

[The Edinburgh Colleges of Physicians and Surgeons have issued the following manifesto:]

Resolutions unanimously adopted by the Royal Colleges of Physicians and Surgeons of Edinburgh regarding Practitioners of Homœopathy.

I.

At Edinburgh, and within the College Hall there, the 9th day of May 1851, an extraordinary Meeting of the Royal College was held, pursuant to a Resolution agreed at the last Quarterly Meeting, and of which Extraordinary Meeting due notice was given.

The President in the Chair. The following Resolutions were moved, seconded, and unanimously agreed to:—

1. That the Royal College of Physicians of Edinburgh did, several years ago, publicly expressed its opinion of Homœopathy and Homœopathic Practitioners, by peremptorily declining to admit into its body a Candidate for its Fellowship who belonged to that denomination; and, consequently, that no Fellow of the College can possibly be ignorant of the light in which all those who practise Homœopathy are regarded by the College.

2. The College regrets that, notwithstanding this decided expression of its opinion, more than one of its Fellows, after being admitted in a different character, have endangered the reputation of the College by becoming Homœopathic Practitioners; and the College expresses an earnest hope that these Fellows, seeing they have thus virtually separated themselves from the College, will spontaneously sever their further connection with an Institution which repudiates them, and from which they can derive, as merely nominal Fellows, nothing else than a false position and a spurious credit.

3. The College feels the more bound thus to express its opinion, seeing that those Fellows who have become Homœopathists, and any other Medical Practitioners who follow Homœopathy, must necessarily be aliens to the other Fellows, and to the profession at large; inasmuch as no Fellow of this College, or any other Physician can, by any possibility, without derogating from his own honour, and from the honour of the profession, meet Practitioners of Homœopathy in consultation, or co-operate with them in the other common duties of professional life.

4. That although the College has not thought it expedient hitherto to take any active steps for disclaiming those fellows who have become Homœopathic Practitioners subsequently to their admission to the College, nevertheless, since it has the power of dealing summarily with those who act in a manner so unbecoming the character of a Physician, it reserves its right to exercise that power when it shall be so advised.

Signed in Name, and by Authority, of the College,

J. Y. SIMPSON, *President*.

II.

At a meeting of the Royal College of Surgeons, held on the 16th of May, the following Resolutions were moved by the PRESIDENT, and unanimously carried:—

1. The College, having considered a series of Resolutions transmitted by the Royal College of Physicians (of Edinburgh) in regard to Homœopathy, feel called upon to express their opinion, that the system so designated being entirely inconsistent with the principles professed by candidates for the diploma of the College of Surgeons, any Fellow or Licentiate who practices it, or countenances others in doing so, by meeting them in consultation, will justly incur the disapprobation of the College.

2. That a copy of the above Resolution be transmitted to the Royal College of Physicians.

Signed in Name, and by Authority, of the College,

JAMES SYME, *President*.

[At a meeting of the Edinburgh Medico-Chirurgical Society held on Nov. 19, 1851; the sentiments of the members were expressed in unmistakable language. Nothing can be more happy than Dr. Simpson's exposé of the absurdity of homœopathic doses; and of the brilliant *debut* of Dr. Henderson with a box of globules, the contents of which, aconite, sulphur, rhus, arnica, &c., &c., &c., had been inextricably confounded and mixed up, through the playful pertinacity of Dr. Simpson's little boy.]

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

A full meeting of the Edinburgh Medico-Chirurgical Society was held on the 19th November, no less than sixty-four members being present. After the transaction of routine business, the following interesting circumstances occurred:—

Professor Syme, in moving "That the public profession of homœopathy shall be held to disqualify for being admitted or remaining a member of the Medico-Chirurgical Society," said,—that in addressing the Society on this occasion, he considered it to be quite unnecessary to enter into a formal refutation of the principles of homœopathy, but, before proceeding further, he would exculpate himself from the charge of inconsistency brought against him by Dr. Henderson, to the effect that he had himself countenanced homœopathy in two instances. This charge appeared at the time in the various medical periodicals. Now, regarding this inconsistency as tantamount to a practical falsehood, he (Mr Syme) took the present opportunity of exhibiting the falsities of the accusation. The cases to which Dr. Henderson alludes are two in number. The fact is, there was a young man who had been under the care of Dr. Nimmo, and who had been placed under his (Mr. Syme's) care. Finding that he had been attended by Dr. Henderson, Mr. Syme requested a meeting, not for the purpose of consultation, but to arrange for placing the medical treatment under the hands of another physician—Dr. John Taylor—as Mr. Syme felt that he could not co-operate with Dr. Henderson. In the second case, he met Dr. Henderson, being under no pledge not to do so. This is the whole extent of his countenance of homœopathy. Mr. Syme next stated what he conceived to be the duty of every member of the profession. As an individual, he had long refused to adopt homœopathy, because he regarded it as a mischievous folly. As a member of a licensing board, he would not refuse any candidate who complied with the regulations of the University. If such an one were base enough to disguise his real sentiments in regard to the practice of physic, the disgrace would rest with him and not with the Board. The duty of a Society like the present was, he said, clear. It was a voluntary Association for upholding sound principles of practice, and for elevating professional character. If, therefore, a member departed from the principles of the Society, and placed himself in opposition to them, he should be requested to withdraw from their body; or, if seeking admission, he should be excluded. He trusted the motion would be unanimously adopted.

Professor Simpson seconded Mr. Syme's motion, and alike also defended himself from the charge of meeting homœopaths in consultation, which emanated from the same quarter. Dr. Henderson affirmed that Dr. Simpson

[illegible]

not yet have finished the grain. And say the homœopaths, a few of these decillionth globules of belladonna will cure scarlet fever. One remark of Mr. Syme reminded Dr. Simpson of a curious fact in the early history of homœopathy in Edinburgh, proving, on the one hand, how far imagination will go, on the other hand, that all homœopathic globules are alike, or rather alike inactive. Some eight years ago Dr. Simpson received a present of a box of homœopathic medicines from an old school-fellow, who had set up as a homœopathic druggist. During the time it was in Dr. Simpson's possession it was given as a plaything to his son, then a child. The boy amused himself by uncorking the bottles, emptying their contents into a general heap, and then refilling them promiscuously. The effect of this was a complete compounding of the globules of different kinds, by mixing them together. It soon happened that a professional brother called at Dr. Simpson's, took a fancy to the box and carried it off. Many weeks after, the new proprietor of the box met Dr. Simpson, and told him he had been trying homœopathy with the contents of his box, and that he had accomplished wonderful cures. Dr. Simpson enjoyed the joke, and said nothing about the box, until, finding his friend had got deep into the homœopathic mire, and actually published a list of cures, he at length told him of the elaborate mixture the globules had undergone. *This friend was Dr. Henderson!!!* In conclusion, Dr. Simpson alluded to those impostors who, pretending to be homœopaths, prescribed ordinary doses in the guise of globules, and practised either way, as best suited their own pockets and the caprices of the patient. These, he argued, should be expelled from the Society.

At the conclusion of this instructive as well as important meeting, the globulists, Drs. Rutherford, Russell, and James Russell, had the good sense to anticipate expulsion by resigning their seats as members of the Society.*

NORWICH PATHOLOGICAL SOCIETY.

At a meeting of the Society, held December 18th, 1851, Dr. Crowfoot, of Beccles, President, the following resolutions were carried:—

1. That the Members of this Society consider the system of treating diseases which has been called homœopathy, to be founded on false data, and propagated through the combined influence of ignorance and imposture. That they, therefore, believe the associating with homœopathic practitioners to be degrading to science, and dishonorable in a moral point of view, and pledge themselves on no account knowingly to meet such practitioners in consultation.

2. That this meeting sees with considerable disapprobation, that the College of Surgeons remains apathetic in the matter of homœopathy and the systems of quackery that are prevalent in the present day.

3. That the above resolutions be published in the *Lancet*, *Medical Gazette*, and *Provincial Medical Journal*.

* Prov. Med. and Surg. Journal.

BOOKS RECEIVED.

1. Miss Martineau and her Master. By Dr. Bushnan. Lond., Churchill, 1851.
* * *A severe but well-merited critique on a book which is a disgrace to the press of a Christian country.*
2. The Laws of Health in Relation to Mind and Body, a Series of Letters from an old Practitioner to a Patient. By Lionel Beale, M.R.C.S. London, 1851.
3. The First Step in Chemistry. By Robert Galloway, F.C.S. London, Churchill, 1851, pp. 89.
4. The Wisdom and Beneficence of the Almighty as Displayed in the Sense of Vision. (The Actonian Prize Essay for 1851.) By J. Wharton Jones, F.R.S. London, Churchill, 1851, pp. 135.
5. Gout; its History, Causes, and Cure. By W. Gairdner, M.D. Second Edition. London, Churchill, pp. 300.
6. Practical Treatise on the Diseases of the Lungs and Heart, including the Principles of Physical Diagnosis. By W. H. Walshe, M.D., &c. London, Taylor and Walton, pp. 580.
7. Digitaline. Rapports de MM. Rayer, Soubeiran, et Bouillaud. Paris, 1851.
8. Observations on the Movements of the Chest in Phthisis. By Dr. Payne Cotton. (Reprint.)
9. Inquiry into the Subject of Vaccination. By Benjamin Ridge, M.D. London, Churchill, p. 31.
10. Experimental Researches on the Nervous System. By Dr. Bennett Dowler, New Orleans, 1850.
11. On the Preservation of the Health of Women at the Critical Periods of Life. By E. J. Tilt, M.D. London, Churchill, 1851.
12. Practical Observations on the Treatment of Permanent Stricture. By Robert Wade, M.R.C.S. (Reprint.)
13. Practical Treatise on the Management of Diseases of the Heart, and of Aneurism, with especial Reference to the Treatment of these Diseases in India. By Norman Chevers, M.D., Calcutta, 1851, pp. 145.
14. Bulletin de la Société de Chirurgie de Paris. Tome premier 8vo, Paris, 1851.
15. Mémoires de la Société de Chirurgie de Paris.
16. Memorials of James Mackness, M.D. Churchill, 1851.
17. On the Infectious Origin and Propagation of Cholera. By Alexander Bryson, M.D. London, 1851.
* * *A closely reasoned production, with a large accumulation of authentic evidence in favour of the contagious nature of cholera.*
18. The Spine, its Curvatures and other Diseases, &c. By Charles Verrall, M.R.C.S., &c. London, Churchill, 1851.
19. History of Epidemic Pestilences from the Earliest Ages. By Edward Bascome, M.D. London, Churchill, 1851.
20. Prevention and Cure of Chronic Disease by Movements, &c. By W. Roth, M.D. London, Churchill, 1851.
21. Collection of Facts illustrative of the Morbid Conditions of the Pulmonary Artery. By Dr. Norman Chevers, M.D. (Reprint.)
22. Suggestions for the extension of Vaccination. By J. Redford, Esq., India. (Pamphlet.)
23. On the Pathological Anatomy of Bronchitis and Diseases of the Lungs, connected with Bronchial Obstruction. By W. T. Gairdner, M.D. (Reprint.)
24. The Climate of Sidmouth. By W. Cullen, Esq.
25. Report of the Proceedings of the Pathological Society. 5th session. 1850—1851.
26. On the Nature and Treatment of Softening of the Brain. By Richard Rowland, M.D. London, Highley, 1851.
27. The Anatomy and Diseases of the Prostate Gland. By John Adams, Esq., F.R.C.S. London, Longmans and Co. 1851.
28. Lectures on the Principles and Practice of Surgery. By Bransby Cooper, F.R.S. London, Churchill, 1851, 8vo, pp. 985.
29. The Principles and Practice of Obstetric Medicine and Surgery in reference to the Process of Parturition. By Francis Ramsbotham, M.D. Third Edition, enlarged. London, Churchill, 1851, pp. 726.
30. Lectures on the Physical Diagnosis of the Lungs and Heart. By Herbert Davies. London, Churchill, 1851.
31. Compendium of Materia Medica and Pharmacy. By John Hunter Lane, M.D. Second Edition, 1851.
32. The Pocket Formulary and Synopsis of the British and Foreign Pharmacopœia. By Henry Beaseley. Fifth Edition, 1851.
33. New London Pharmacopœia. Arranged with Reference to the Edinburgh and Dublin Codex. By Peter Squire. London, Churchill, 1851.
34. The Stethoscope and Virginian Medical Gazette.
35. Transactions of the Medical Society of Pennsylvania.

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1. Of Happiness in its Relations to Work and Knowledge. By John Forbes, M.D., F.R.S. 2s.

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